

# **South Carolina Forestry Commission**

## **Annual Report 2003 - 2004**

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## **STATE COMMISSION OF FORESTRY**

### **Members of the Commission**

J. Kenneth Hill, Chairman, Fort Mill

Gary Poliakoff, Vice Chairman, Spartanburg

Lawrence J. Bloomer, Easley

G. Edward Muckenfuss, Summerville

John A. McAllister, Mt. Carmel

George W. Flanders, Lancaster

Dr. Benton H.Box, Clemson

Frank A. McLeod. III, Columbia

James F.Barker, President, Clemson University

Boris Hurlbutt, Chairman Emeritus

### **Administration**

Robert C. Schowalter, State Forester and Secretary to the Commission

William Boykin, Deputy State Forester

Larry Moody, Division Director, Administration

Cecil Campbell, Division Director, Coastal Region

John Dickinson, Division Director, Pee Dee Region

Charles Ramsey, Division Director, Piedmont Region

## **MISSION**

The mission of the Forestry Commission is to protect, promote, enhance, and nurture the forest lands of South Carolina in a manner consistent with achieving the greatest good for its citizens.

Responsibilities extend to all forest lands, both rural and urban, and to all associated forest values and amenities including, but not limited to, timber, wildlife, water quality, air quality, soil protection, recreation, and aesthetics.

The Forestry Commission shall have general and specific responsibilities for the promulgation and enforcement of laws and regulations related to protection of the forest and its associated values.

The Commission shall be responsible for promoting and developing the appropriate technologies to accomplish its objectives, and for the development and promulgation of Best Management Practice Guidelines for South Carolina's forest land.

## FOREST PROTECTION

This section encompasses Fire Management, Law Enforcement, Forest Health, and Equipment programs.

### **FIRE MANAGEMENT**

*The South Carolina Forestry Commission is responsible for protecting 13,657,033 acres of forestland in South Carolina from wildfire. This total area protected is based on the 2001 Forest Inventory Analysis data with 10% added to cover adjacent non-forest land. This figure includes 101,320 acres of federal land protected under special contract, which includes such lands as the Carolina Sandhills National Wildlife Refuge and the Corps of Engineers land around such lakes as Lake Thurmond, Hartwell, and Russell. Also included is forestland protected by Mutual Aid, which is approximately 824,801 acres of additional federal land that includes lands such as the Francis Marion and Sumter National Forests, National Park lands, and lands owned by US Fish and Wildlife Service.*

### **Wildfire Summary**

Agency firefighters recorded 3,409 wildfires that burned a total of 21,394 acres of forestland and grassland during the fiscal year.

The Dacusville Fire in Pickens County burned over 150 acres in April 2004. This large wildland fire threatened nearby homes and property in the Dacusville Fire District. The Forestry Commission was assisted by six surrounding fire departments along with six other local and state emergency services (Pickens County Sheriff, EMS, Road Maintenance and Rescue along with state DPS and DOT). No homes were lost.

Another significant fire occurred in Cherokee County on March 26, 2004, when a warden had to leave his tractor because of the wildfire racing up the slope and overrunning him and his tractor. The operator received second-degree burns. Weather conditions were warm and dry with fuel moistures (one hour and ten hour) below 10%. The fire was burning in a young loblolly pine plantation averaging 15 feet in height and on a tight spacing of about 8 feet by 8 feet on about an 8-10% slope.

The Donaldson Road Fire in Marlboro County burned 90 acres on a March night with winds gusting to 60 mph. Local fire departments assisted in protecting and securing some homes with no damage resulting.

The Biggin Fire burned in early April on 524 acres of private land in Berkeley County. A cooperative effort among the SCFC, USDA Forest Service, USDI Fish & Wildlife Service, and volunteer fire departments resulted in no homes lost or any injuries or fatalities.

Budget restrictions have reduced the workforce by about 28%, leaving approximately 18 firefighting positions vacant for at least a portion of the year.

### **Fire Protection Cooperatives**

The Forestry Commission has cooperative arrangements with 11 fire and emergency management entities. Activities for each cooperative during FY 2003-04 are as follows:

**Southeastern States Forest Fire Compact Commission:** Formed in 1954, the Compact allows member states to provide and receive mutual aid in fighting wildland fires. Member states include: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The Forestry Commission received no requests for assistance during the year.

**SC Emergency Management Division:** SC Forestry Commission personnel responded to one emergency activation during the year. Forestry Commission personnel participated in several EMD emergency response training sessions.

**SC Army National Guard:** Under an agreement with the National Guard, helicopter firefighting support is available when requested by SCFC. Requests from SCFC are channeled through EMD and the Governor's Office to activate the Guard.

The Guard's primary firefighting mission is providing helibucket service to SCFC Incident Commanders using SCFC's 780-gallon Bambi buckets. Guard helicopters are also available to transport firefighters into rough or inaccessible terrain. No requests for assistance from the National Guard helibucket service were made this year.

**Volunteer Fire Assistance Program:** The following grants were awarded:

Title II Grants for structural and wildland firefighting needs: 57 fire departments were allocated \$72,000.

National Fire Plan Grants for wildland firefighting needs: 85 fire departments were allocated \$105,000.

**Federal Excess Property Program:** Acquired 10,905 items with acquisition value of \$3.48 million. Two hundred three (203) pieces of federal excess equipment with an acquisition value of \$3.84 million were loaned to fire departments during the year. At present, 1,674 pieces of equipment with acquisition value of \$26.5 million are assigned to 473 fire departments statewide.

**National Weather Service:** NWS provides daily fire weather forecasts and atmospheric dispersion information. During the year, SCFC and NWS work to improve content of daily weather forecasts.

**USDA Forest Service:** A mutual aid agreement between the US Forest Service and SCFC allows both parties to provide initial attack firefighting within one-quarter mile of National Forest boundaries.

SCFC provided initial attack on a number of fires on the Francis Marion and Sumter National Forests during the fire season, and SCFC investigators assisted with wildfire investigation and stake-outs.

**DOD Corps of Engineers:** Beginning in 1997, SCFC has provided all fire suppression services on 55,320 acres of Corps of Engineers land. Under the terms of the agreement, actual fire suppression costs are reimbursed to the SCFC.

**USDI Fish and Wildlife Service:** Under the terms of a 1992 land acquisition agreement, SCFC provides initial attack fire suppression on the 46,000 acre Carolina Sandhills National Wildlife Refuge. The agreement terminates in 2042. SCFC maintains mutual aid firefighting agreements with the following National Wildlife Refuges: Ace Basin, Cape Romain, Savannah, Pinckney Island, and Santee.

**USDI National Park Service:** Agreement maintained; no reportable activity.

**Wildland Fire Protection Partnership:** Organized in 1991, the Partnership seeks solutions to wildfire management problems in the wildland-urban interface. Membership includes the SC Forestry Commission, USDA Forest Service, SC Firemen's Association, Department of Health and Environmental Control, SC Division of Emergency Preparedness, SC Fire Marshal, SC Fire Academy, and SC Forestry Association (ex officio).

## **Fire Weather**

**Weather Stations:** The Forestry Commission, USDA Forest Service, USDI National Park Service, Department of Defense (Ft. Jackson), and USDI Fish and Wildlife Service share a network of 12 Automated Weather Stations across the state. Data from these stations is used in daily calculations for the National Fire Danger Rating System. Weather readings from these stations are available 24 hours a day for wildfire and prescribed fire management purposes.

### Inches Precipitation: FY 2004\*

Month	Precipitation
July 2003	8.47
August	4.59
September	3.15
October	3.49
November	1.69
December	2.57
January 2004	1.71
February	5.19
March	.097
April	2.24
May	2.82
June	6.01
<b>Total</b>	<b>42.90</b>

\*Source – National Climatic Data Center

### Precipitation Last 5 Years\*

Fiscal Year	Precipitation Inches	Departure from Normal**
1999-00	42.24	-6.03
2000-01	40.56	-7.71
2001-02	34.07	-14.20
2002-03	61.18	+12.91
2003-04	42.90	-5.99

\*Source – National Climatic Data Center

\*\*statewide normal, based on previous 30 years is 48.89 inches

**Readiness Plan:** The daily readiness level of Forestry Commission firefighters is based on fire danger data, available number of firefighters, and status of firefighting equipment. Average readiness levels for each of the three regions for FY 2004 are as follows:

Region	Coastal	Pee Dee	Piedmont
Readiness 1 (No wildfire danger)	17 days	9 days	1 days
Readiness 2 (Low wildfire danger)	256 days	279 days	180 days
Readiness 3 (Moderate wildfire danger)	61 days	57 days	144 days
Readiness 4 (High wildfire danger)	32 days	21 days	41 days
Readiness 5 (Extreme wildfire danger)	0 days	0 days	0 days

Burning Ban and Red Flag Fire Alert: There were five Red Flag Fire Alerts and one State Forester's Burning Ban declared during the year. These included:

September 17-19 – a Red Flag in advance of Hurricane Isabel  
 November 12-14 – a Red Flag in 33 counties as a dry cold front approached  
 February 21-23 a Red Flag in Lexington and Richland Counties due to dry fuels  
 March 5-10 – a statewide Red Flag due to high winds and low humidity  
 March 14-15 – a Burning Ban in 19 upstate counties  
 April 3-12 – a statewide Red Flag due to high wind and low humidity.

## Dispatch and Air Operations

**Dispatch:** Forestry Commission dispatch is by closest available resource, regardless of political or administrative boundaries. Dispatching was handled by regional dispatch centers located in Walterboro, Florence, and Newberry.

**Air Operations:** Specially trained private aerial contractors provide basic wildfire detection services. Forestry Commission pilots equipped with Federal Excess planes provide incident reconnaissance as well as additional detection service. The SCFC has 10 aircraft with 2 full time pilots and on average 8 temporary pilots which fly on as needed basis. The full time position in Coastal region was vacant as they operated strictly with temporary pilots and the detection contractors.

During the year, SCFC pilots flew a total of 1,794 hours (Coastal—329 hours, Pee Dee—586 hours, Piedmont—879 hours); contractors flew a total of 2,062 hours.

## Prescribed Fire

**Certified Prescribed Fire Manager Program:** Two Certified Prescribed Fire Manager Programs were conducted during the year with 34 participants. Interest in this program is leveling off as the majority of those conducting prescribed burning throughout the state have attended the training over the last several years.

### Prescribed Burning for Forestry, Wildlife, and Agriculture FY04 (Smoke Management Guidelines)

Region	Forest Understory		Forestry Site Prep.		Wildlife		Agriculture	
	Number	Acres	Number	Acres	Number	Acres	Number	Acres
Coastal	2,194	185,458	2,261	8,675	528	53,399	3,429	55,430
Pee Dee	1,154	60,261	816	3,936	362	24,402	3,176	64,499
Piedmont	418	39,952	1,822	5,276	101	4,972	792	6,551
<b>Totals</b>	<b>3,766</b>	<b>285,671</b>	<b>4,899</b>	<b>17,887</b>	<b>991</b>	<b>82,773</b>	<b>7,397</b>	<b>126,480</b>

**Total Forestry, Wildlife & Agriculture Burns: 17,053 for 512,811 acres.**

## Fire Prevention Information

**Wildland-Urban Interface (WUI):** Work continued on assessing wildland-urban interface risks. As of this date 507 communities have been assessed, with 137 communities assessed at high to very high risk. Approximately 35 community mitigation action plans have been developed. Three have been delivered to homeowners where *'How to Have a Firewise Home'* workshops have been conducted; two plans for Savannah Lakes in McCormick County and one for Calhoun Forest in Pickens County. Additional Firewise workshops, *Living on the Edge in South Carolina*, were presented in Horry County, Ridgeland, Mt. Pleasant, Jasper County, Lugoff/Elgin and at Table Rock. Total attendance at the workshops exceeded 500 community leaders and homeowners.

The SC Forestry Commission has received a 2003 Southern Wildland Urban Interface Grant to address the Linear Urban Interface (LUI) problem which will deal with wildland fuels that produce significant smoke on heavily trafficked roadways. Training for personnel who will be involved in gathering information for this smoke model was conducted. Equipment was distributed to the field to effectively and accurately gather and document the data. Also, direct mailings were made to about 184,000 people in storm damaged counties and in areas where large devastating fires threatened communities advising them of the danger and instructing them on Firewise principles.



### Fires By Cause

Cause	Number	Acres Burned	Average Acres per Fire	Percent of Total Number FY 03
Lightning	47	635.4	13.5	1.38
Campfire	12	23.3	1.9	0.35
Smoking	105	940.8	9.0	3.10
Debris Burning	1715	9871.7	5.8	50.31
Incendiary	752	6723.5	8.9	22.06
Equipment	192	793.4	4.1	5.63
Railroad	13	95.8	7.4	0.38
Children	218	585.9	2.7	6.39
Miscellaneous	355	1724.6	4.9	10.40
<b>TOTALS</b>	<b>3409</b>	<b>21,394.3</b>	<b>6.3</b>	<b>100.00</b>

### Five-Year Summary: All Fires

Fiscal Yr.	Acres Protected	# Fires	Acres Burned	Avg. Acres/Fire	% Area Burned
1999-00	12,807,924	4,715	21,399.3	4.5	0.17
2000-01	12,807,924	5,283	29,933.9	5.7	0.23
2001-02	12,807,924	6,378	49,371.8	7.7	0.39
2002-03	13,657,033	1,760	9,182.0	5.2	0.07
2003-04	13,657,033	3,409	21,394.3	6.3	0.16
<b>Five Year Averages</b>		<b>3,161</b>	<b>26,256.3</b>	<b>5.9</b>	<b>0.20</b>

## Acres Protected and Total Burning Notifications by County, Fiscal Year 2004

County	Total Acres Protected	Smoke Mgt. Notifications	Other Notifications
Abbeville	248,551	134	2,973
Aiken	524,743	840	14,953
Allendale	199,005	445	734
Anderson	216,023	264	12,660
Bamberg	202,862	398	1,490
Barnwell	266,959	479	3,197
Beaufort	130,448	328	7,669
Berkeley	595,291	871	15,094
Calhoun	151,294	259	3,650
Charleston	318,526	418	7,154
Cherokee	168,077	81	4,175
Chester	315,565	148	3,157
Chesterfield	416,239	364	6,946
Clarendon	238,952	463	5,610
Colleton	560,896	1,229	12,993
Darlington	176,333	285	5,684
Dillon	163,935	277	3,170
Dorchester	272,524	412	10,122
Edgefield	279,433	194	2,631
Fairfield	408,433	99	2,399
Florence	308,707	532	13,690
Georgetown	400,136	538	9,261
Greenville	296,082	141	15,020
Greenwood	205,593	153	3,466
Hampton	303,663	822	3,605
Horry	493,012	606	19,737
Jasper	341,036	633	3,244
Kershaw	376,376	251	14,814
Lancaster	291,845	88	4,474
Laurens	337,499	181	5,070
Lee	121,735	244	1,615
Lexington	256,939	270	43,946
Marion	226,896	225	7,774
Marlboro	226,676	166	4,425
McCormick	223,394	72	1,193
Newberry	334,566	131	2,994
Oconee	292,590	165	11,127
Orangeburg	446,887	1,278	12,149
Pickens	236,029	167	9,435
Richland	352,904	236	8,442
Saluda	196,376	147	1,925
Spartanburg	286,496	246	8,278
Sumter	268,338	370	11,961
Union	277,640	96	591
Williamsburg	407,761	1,099	6,389
York	293,768	208	11,914
<b>Total</b>	<b>13,657,033</b>	<b>17,053</b>	<b>362,999</b>

**Total No. Smoke Mgt. and Other Notifications 380,052**

**NOTE:** An error was found on this page and it was replaced 10/26/06

**Total All Land Fires by County & Cause, Fiscal Year 2004**

County	Lightning		Campfire		Smoking		Debris Burning		Incendiary		Equipment		Railroad		Children		Miscellaneous		Total No.	Total Acres
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres		
Abbeville					1	0.5	20	49.45	3	25.5	8	11.4			3	5.1	11	25.6	46	117.55
Aiken	2	15.1	1	1	3	11.5	63	405.2	27	84.9	11	16.3			16	22.4	16	53.1	139	609.5
Allendale	1	0.1			2	7.1	13	67.2	4	35.3					2	4	3	5.4	25	119.1
Anderson					8	82.4	13	24.7	1	3	3	1.8			4	12.2	11	36.5	40	160.6
Bamberg							17	51	3	2.3	3	3.3					1	1	24	57.6
Barnwell	2	3			1	0.1	7	32.5	1	2.5	3	5.6			4	25.6	6	54	24	123.3
Beaufort							38	176.5	30	146	1	0.5			3	9.5	1	0.5	73	333
Berkeley	1	0.8			3	15.5	80	1364.2	41	397.3	4	4.6	1	1	8	24.6	15	200	153	2008
Calhoun					3	16	31	33.3	5	27.2	5	28.5			3	3.4	3	23	50	131.4
Charleston					1	25	33	205.5	24	479.5	1	1			5	24.5	5	64.35	69	799.85
Cherokee					4	28.5	9	25.3	3	58.4	1	0.2			1	0.7	6	39	24	152.1
Chester	2	93	1	0.6	1	0.1	12	27.35	2	2.5	1	4	1	0.5	2	7	7	53.7	29	188.75
Chesterfield	3	89			12	54.7	69	495.9	19	121	9	20.3	1	6	8	17.3	11	15.8	132	820
Clarendon			1	1			70	318.8	30	112	7	32.8			1	0.5	6	6.5	115	471.6
Colleton					2	5.5	87	465.3	59	839.3	6	83.2	1	40	7	29.5	4	1.5	166	1464.3
Darlington	1	0.1	1	0.5	1	4	96	490.7	34	170.4	5	30.5			6	10.7	14	128	158	834.9
Dillon					3	4.7	21	89.9	15	184.5	6	14.5			3	2.8	8	19.7	56	316.1
Dorchester	1	0.5					41	307.1	10	118.8	1	0.5			2	2.1	3	11.1	58	440.1
Edgefield							19	77.4	1	0.2	3	17.5					6	17.5	29	112.6
Fairfield	1	70			2	4.2	18	60.5	4	3.2	3	2.6			3	4.4	13	55.8	44	200.7
Florence			1	1	8	15.1	86	400.1	50	402.5	9	30.45			11	11.1	8	10.5	173	870.75
Georgetown							51	339.75	25	543.5	3	1.6			7	17.6	3	20	89	922.45
Greenville			1	0.4	3	25	16	42.6	7	32			1	40	1	3	11	83.7	40	226.7
Greenwood							17	100.3	1	1	3	2.1	1	0.5	2	8	5	4.5	29	116.4
Hampton	1	5					33	53	12	79.55	3	1.7			2	3.1			51	142.35
Horry	5	5.1	1	3	3	7.5	70	495	39	382.7	3	19			11	62.3	15	39.9	147	1014.5
Jasper	3	18.6			1	0.1	66	832.5	43	273.5	10	25.6	3	4.1	6	12.4	1	2	133	1168.8
Kershaw	2	99			8	7.4	39	166.1	15	103	13	107.9			7	28.1	14	61.3	98	572.8
Lancaster	1	10	1	3	2	4.5	17	69.3	5	8.1	1	10					6	15.1	33	120
Laurens	1	2	1	0.1	1	0.1	19	74.7	13	79.6	3	18	1	1	3	19.5	10	80.6	52	275.6
Lee			1	0.5			26	208.7	18	145.9	5	49.5			3	3.5	10	34.2	63	442.3
Lexington	5	39.2			1	0.1	47	105.2	10	19.5	14	12.4	1	0.4	30	63.9	15	36.6	123	277.3
Marion	1	3					17	58.5	10	42.1					2	2.5	3	2.2	33	108.3
Marlboro	1	70			1	0.5	20	132.7	18	373.3	3	6.2			1	14	3	1.7	47	598.4
McCormick	2	61					8	84.6			3	21.1			1	2	2	3	16	171.7
Newberry	2	13					11	59.2			1	1			1	4	13	27.5	28	104.7
Oconee			1	12	1	1	20	129.3	1	2					2	3.1	4	100.5	29	247.9
Orangeburg	3	15.2			14	439.1	78	202.1	8	45	12	65.3			4	18	8	13.4	127	798.1
Pickens	1	0.2			3	128	32	116.2	2	0.4	3	2.3			5	6.5	10	52.5	56	306.1
Richland			1	0.2	1	7	20	118.5	12	73.6	1	7			15	43.2	10	55	60	304.5
Saluda	1	5					35	186.9	2	4.1	5	12.1			1	0.1	5	2.1	49	210.3
Spartanburg	1	2.5			2	3.2	18	148.1	8	74	1	8			5	4.2	10	52.7	45	292.7
Sumter	2	5			1	0.3	76	362.3	23	126.6	4	19.5			6	8.1	18	75.5	130	597.3
Union	1	10					18	105	5	22.5	4	61.75			4	12.4	10	35.3	42	246.95
Williamsburg					5	29.1	98	475.7	106	1057.2	5	26.5	2	2.3	3	17.5	3	1.2	222	1609.5
York					3	13	20	37.5	3	18	2	5.3			4	11.5	8	101.5	40	186.8
<b>Grand Total</b>	<b>47</b>	<b>635.4</b>	<b>12</b>	<b>23.3</b>	<b>105</b>	<b>940.8</b>	<b>1715</b>	<b>9871.65</b>	<b>752</b>	<b>6723.45</b>	<b>192</b>	<b>793.4</b>	<b>13</b>	<b>95.8</b>	<b>218</b>	<b>585.9</b>	<b>355</b>	<b>1724.55</b>	<b>3409</b>	<b>21394.25</b>

**Total All Land Fires by County & Month, Fiscal Year 2004**

County	Jul-03		Aug-03		Sep-03		Oct-03		Nov-03		Dec-03		Jan-04		Feb-04		Mar-04		Apr-04		May-04		Jun-04		Total No.	Total Acres
	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres		
Abbeville					2	2	1	2.3	4	6.6	4	13.1	11	13.15	2	4.5	13	68.3	5	4.6	1	1.5	3	1.5	46	117.55
Aiken	2	0.3			8	3.8	4	3.6	6	24.3	8	29.8	15	50.8	15	48.8	40	360	23	60.7	15	26.2	3	1.2	139	609.5
Allendale					1	0.3	2	6.1					4	20.7	3	15	6	40.7	6	9.2	1	25	2	2.1	25	119.1
Anderson					2	0.2	1	0.2	2	1	2	6.5	5	8.5	2	6	12	87	9	37.1	4	9.1	1	5	40	160.6
Bamberg											2	6.1	7	7.7			7	16.2	3	11.5	3	15	2	1.1	24	57.6
Barnwell							1	2					5	27.5			8	17.7	5	41.6	4	33.5	1	1	24	123.3
Beaufort					1	0.2	1	0.5					18	64.2	5	8.2	26	134.8	16	111.6	2	6	4	7.5	73	333.
Berkeley					1	0.5	1	2			6	2	35	196.15	10	63.5	63	996.65	24	698.1	6	5.8	7	43.3	153	2008.
Calhoun							5	35			2	5	10	39.5	4	20.5	10	8.5	14	20	5	2.9			50	131.4
Charleston					1	0.1	2	3	3	46	1	0.1	7	82.8	3	1.2	31	504.85	17	43.2	3	118.5	1	0.1	69	799.85
Cherokee									1	3	3	4.2	1	7	4	5.4	11	115.4	2	16	2	1.1			24	152.1
Chester							1	0.5	2	12	3	5	1	20	2	4.2	8	15.1	5	32.6	5	96.1	2	3.25	29	188.75
Chesterfield			1	4	4	3.6	1	0.3	7	5.3	11	24	10	26.3	20	86.4	32	344.1	24	200.3	18	117.5	4	8.2	132	820.
Clarendon			1	1	1	2	5	11	1	0.5	12	12.7	13	27.5	3	59.5	44	294.6	29	46	4	4.7	2	12.1	115	471.6
Colleton			1	0.1	1	0.1	4	7.5	4	1.3	4	6.5	25	97.8	21	109.2	68	670.9	29	527	5	1.4	4	42.5	166	1464.3
Darlington	1	0.1	1	0.1	6	9.1	8	13.7	7	10.6	9	19.6	36	235.3	10	65.3	43	259.7	28	183.8	6	32.5	3	5.1	158	834.9
Dillon							1	0.2	4	23.1	2	30.5	9	48.6	4	3.1	21	155.2	9	49	4	3.4	2	3	56	316.1
Dorchester									1	0.1	2	6.7	10	32.3	5	20.5	27	363.2	9	15.7	2	0.6	2	1	58	440.1
Edgefield	1	2			1	0.5	1	1			3	9	6	29.7			11	56.9	3	7.5	3	6			29	112.6
Fairfield					1	2	2	0.4	3	0.8	5	12.2	5	22.2	2	3.1	10	66.6	3	7.2	9	14.5	4	71.7	44	200.7
Florence			1	3	5	16.2	7	7.5	13	15.7	12	37.6	22	174.7	4	6.6	56	373.75	36	195.1	10	33.5	7	7.1	173	870.75
Georgetown	1	0.5	3	0.9	1	10	2	8	2	1	2	1.1	15	149.6	7	105.85	36	530.6	14	54.8	2	1	4	59.1	89	922.45
Greenville							1	0.2	3	13	4	34.6	7	11.6	6	40	10	43	8	79.3	1	5			40	226.7
Greenwood					2	2			1	6	3	14.5	5	6.3	4	16	9	65.1	5	6.5					29	116.4
Hampton					1	1			3	2.5	4	9.6	6	6.35	4	4.8	20	46.8	11	66.1	1	0.2	1	5	51	142.35
Horry	1	1			1	1	1	0.5	2	10.4	1	0.1	15	61.7	8	79.8	50	522.9	34	165	20	140.4	14	31.7	147	1014.5
Jasper	2	9.5			2	1.2	3	5	4	3.6	6	24.1	15	64.9	6	16.2	64	526	22	501.5	6	12.6	3	4.2	133	1168.8
Kershaw	1	4	1	0.1	1	0.1	4	3.4	4	6.5	3	43	10	31.7	9	17.7	33	138.7	22	170.1	4	23.5	6	134	98	572.8
Lancaster			1	2	2	3.1	3	16	5	10.1	3	12	1	3	1	1	8	30.1	5	28.5	2	3.6	2	10.6	33	120.
Laurens					2	1.1	4	20	2	4	5	11.9	7	36.8	3	6.5	16	168.6	9	21.9	2	0.6	2	4.2	52	275.6
Lee					4	8.5	3	4.5	1	1.5	2	6	10	95.1	6	48.6	20	142.4	12	32.2	3	46.5	2	57	63	442.3
Lexington			2	1.5	3	7.5	3	6	5	8.9	6	5.9	20	36.8	11	35.3	28	60.4	25	40.8	15	69.8	5	4.4	123	277.3
Marion	1	0.1	1	1.5			1	4.5					3	14.5	4	26	14	30.4	3	19.6	2	4	4	7.7	33	108.3
Marlboro			1	5			2	1.6	1	3	7	9.5	1	2	6	125.5	15	284	7	63.2	4	1.6	3	103	47	598.4
McCormick					2	2	1	1	1	0.1			4	47	1	6	4	112	3	3.6					16	171.7
Newberry					1	1			1	0.2	5	22.9	3	57	3	3.2	3	1	6	4.5	5	14.4	1	0.5	28	104.7
Oconee					2	1.3	1	1	1	0.5	1	2	1	0.1	3	3.3	14	207	6	32.7					29	247.9
Orangeburg			1	0.1	2	2.5	4	33.5	4	8.1	8	21.7	24	60.8	9	47.5	41	410.1	23	187.5	6	10	5	16.3	127	798.1
Pickens	1	0.2			1	0.1	1	0.5	1	0.5	4	28.5	6	42.5	6	14.9	18	96	17	120.9	1	2			56	306.1
Richland	1	0.5			3	24	5	10.5	2	2			7	42.2	4	20.5	17	103.3	13	69.5	6	29	2	3	60	304.5
Saluda					3	6.2	3	10.1	3	0.4	4	0.9	5	3.1	4	8.2	14	9.4	10	88	2	79	1	5	49	210.3
Spartanburg	2	9.5					1	1.5	6	12.5	3	14.5	5	61.1	5	51	10	44.7	7	10.9	5	34	1	53	45	292.7
Sumter			3	6.7	2	2.1	2	1.5	5	42.5	3	13.1	13	82	7	18.5	59	257.65	27	130.55	5	31.6	4	11.1	130	597.3
Union			1	0.1			1	0.2	1	4	8	28.5	7	61.1	3	2.6	12	61.35	8	79.1			1	10	42	246.95
Williamsburg			1	1	2	8.5	2	0.2	7	22.4	11	52.9	45	387.8	7	75	91	714.7	39	303	14	36	3	8	222	1609.5
York			1	1			1	2	3	4.7	3	7	5	24.5	6	11	16	127.3	3	7	1	0.3	1	2	40	186.8
<b>Grand Total</b>	<b>14</b>	<b>27.7</b>	<b>21</b>	<b>28.1</b>	<b>72</b>	<b>123.8</b>	<b>97</b>	<b>228.5</b>	<b>126</b>	<b>318.7</b>	<b>187</b>	<b>594.9</b>	<b>495</b>	<b>2621.95</b>	<b>252</b>	<b>1315.95</b>	<b>1169</b>	<b>9683.65</b>	<b>638</b>	<b>4604.55</b>	<b>219</b>	<b>1099.9</b>	<b>119</b>	<b>746.55</b>	<b>3409</b>	<b>21394.25</b>

## **FOREST HEALTH**

The Forest Health Program, in cooperation with the State Division of Plant Industry and the U.S. Forest Service, maintains a program to detect, evaluate, and suppress forest pests. Through cooperative agreements, these agencies make their technical assistance and advice available to the Forestry Commission.

The current forest pest detection and reporting system involves the reporting by field foresters of forest pests that are causing abnormal losses, require control action, or which may present new problems. Aerial surveys are made periodically for specific pests to determine occurrence and the need for suppression action.

### **Major Insect Problems**

#### **Southern Pine Beetle**

The Southern Pine Beetle outbreak that began in York County in 1997 collapsed over most of the outbreak zone. As of June 30, 2004, there were 5 counties in outbreak status. These were Abbeville, Edgefield, Greenwood, McCormick, and Oconee. The largest active infestations were several hundred trees in size.

The calendar year 2003 was our worst on record for losses to Southern Pine Beetle. In that period we had over \$255 million in pines killed by the SPB.

In fiscal year 2004, the losses were much less. During that time, SCFC foresters and technicians plotted 3,279 active beetle spots containing 72,536 trees. This timber had an estimated volume of 4,112 cords and 2,901 thousand board feet. The green value of this timber was \$927,223.

The SCFC continued in a SPB suppression program in cooperation with the USFS. This program included funding to operate cut and leave controls on isolated or non-merchantable SPB spots. We received no requests for cut and leave treatments this year.

The suppression program also funded six positions in the agency where existing employees were redirected to the SPB program from other areas such as forest management and fire control. Without the SPB program, these positions could have been lost to budget cuts.

During the spring of 2003, thirty-one counties were pheromone trapped for prediction of Southern Pine Beetle population trends. No counties trapped enough beetles to predict a severe outbreak or an increasing beetle population. Five additional counties in the piedmont and coastal plain had predictions of moderate beetle activity. These were Dorchester, Edgefield, Horry, McCormick, and Saluda. Aerial surveys were in progress at the end of the fiscal year and very little beetle activity was seen outside of the Savannah River drainage. Surveys will continue as needed.

The U.S. Forest Service has funded a new initiative that is targeted at preventing or reducing Southern Pine Beetle damage. In this program SCFC personnel make forest management recommendations for practices known to minimize future beetle damage. These include thinning, prescribed burning, planting at low density, matching planted species to site, and other known mitigation measures. This program will fund approximately nine forester level positions.

#### **Hemlock Woolly Adelgid**

An exotic insect pest of hemlock was discovered in South Carolina this year. It is the Hemlock Woolly Adelgid, a small insect that feeds by sucking plant juices from its host tree. Unfortunately, heavy infestations of this pest kill hemlocks and control is very difficult, especially in the general forest. Clemson University has established an insect rearing center to raise insect predators of the adelgid, but it will be at least a year before it is operational. We may face the loss of hemlock as an important forest species. We plan a survey of susceptible stands to delineate the infestation area.

### **Emerald Ash Borer**

This is another introduced insect that is not yet a problem in South Carolina but is established in the northern states. We will do a survey of Ash in S.C. this year to certify our lack of infestation.

## **Major Disease Problems**

### **Oak Wilt**

Oak Wilt disease has been identified in Aiken, Barnwell, Chesterfield, Kershaw, Lancaster, Lee, and Richland counties. Except for the recent discoveries in Aiken and Barnwell Counties the disease appears to be static and causing losses only to low value oaks. Since there is potential for loss of valuable trees, including urban trees, periodic surveys are made to evaluate the spread.

### **Dutch Elm Disease**

Dutch Elm disease has been confirmed in Aiken, Anderson, Cherokee, Chester, Chesterfield, Edgefield, Fairfield, Greenville, Greenwood, Kershaw, Lancaster, Laurens, Lexington, Marlboro, Newberry, Oconee, Pickens, Richland, Saluda, Spartanburg, and York counties. It is expected to gradually spread through the state because the primary agent of spread is the smaller European elm bark beetle that occurs statewide.

### **Dogwood Anthracnose**

In 1988 a new anthracnose disease of dogwood was noted for the first time in South Carolina. This disease is caused by the fungus *Discula destructiva*. Symptoms include foliage blighting, canker formation, and progressive deterioration. The fungus usually kills infected trees in two to three years. At this time infected trees have been found in Anderson, Greenville, Laurens, Oconee, Pickens, and Spartanburg counties. As part of a southwide effort, the Forestry Commission has established 19 permanent plots in the counties known to harbor infections of the fungus. The dogwoods in those plots will be monitored periodically to determine the rate of spread of this potentially devastating disease.

### **Sudden Oak Death**

Sudden Oak Death is an exotic disease caused by a fungus in the genus *Phytophthora*. It is presently known to occur only on the West Coast in the USA. This disease kills oaks and causes leaf spots on many other species. Testing of eastern species of oaks in California has shown that they could be susceptible to this disease if it occurs here.

As part of a southeastern project, we are cooperating in a survey to be sure the disease does not occur here. Oaks and rhododendrons were sampled in the forest adjacent to commercial nurseries. At this time all sample results from the lab at Clemson are negative.

## **Miscellaneous Insect and Disease Checks**

Commission foresters made approximately 2,762 field checks of insect and disease problems and made recommendations for prevention and control. Other inquiries were handled by telephone, mail, and personal contact.

## **Insect and Disease Laboratory**

During Fiscal Year 2003-2004, the Insect and Disease Laboratory processed 69 samples. Commission employees and private individuals submitted these for analysis. Recommendations for control of various pests identified were given where needed. In addition to these samples, 15,176 southern pine beetles and 47,037 clerids were counted in the lab.

## **Exotic Insect Trapping Project**

The I&D Unit is cooperating with the US Forest Service in a program to identify exotic insects which may have become established in the state. At three locations we have placed four different pheromone traps. These traps should catch bark beetles and ambrosia beetles that can be sent to the USFS for analysis. The traps are checked every two weeks and insects captured are collected and sent to a taxonomist for identification. The results of the survey will be published upon completion.

## **Forest Health**

The SCFC entered into agreement with the USFS to evaluate permanent Forest Health plots throughout South Carolina. This was done by the Management Section and reported there. As another part of this program, the Forestry Commission also received additional funding for off-plot activity to survey for and report on other forest insects and diseases.

In conjunction with the spring 20% beetle survey, the entire state was surveyed for defoliation, beaver damage, fire, and annosus root rot damage.

Major defoliation continued this year due to an outbreak of Forest Tent Caterpillar. Larvae of this insect defoliated gum and other bottomland hardwoods over 433,218 acres in 14 counties. Defoliation occurred until late May at which time the insects pupated and became adults. The most impacted areas were along the Congaree, Wateree, Upper Santee, Pee Dee basins, and in many low country swamps.

Timber losses due to beaver impoundment and feeding were seen on a total of 17,225 acres. Fire mortality was detected on 15,455 acres. The estimated value of beaver and fire-killed timber was \$5 million. Annosus root rot was also identified on 36,740 acres. Value lost due to annosus was estimated to be \$991,980.

## **EQUIPMENT**

In July 2003, the Forestry Commission reorganized the Equipment Maintenance Section in the Regions to promote uniformity. A supervisor was established for the Florence, Kingstree, and Walterboro shops; the equipment manager supervised the Columbia, Newberry, and Spartanburg shops.

Each shop was assigned a specified number of units (truck and tractor) to maintain. We also stressed the concept of traveling mechanics to perform as many repairs in the field as practical to reduce costs of the large trucks traveling to the shops. All shops concentrated on the firefighting equipment while commercial vendors were established in the counties to perform repair services for light vehicles that are great distances from shops. This allowed Forestry Commission shops to spend more time on firefighting equipment.

Maintenance facilities at the Regions, State Forests, Taylor Nursery, Niederhof Seed Orchard and Central Repair Shop were all certified by State Fleet Management. Niederhof Seed Orchard's maintenance facility was closed due to budget reductions. The facility will be available for traveling mechanics to use. The Forestry Commission has nine maintenance facilities.

Four training sessions were offered to our mechanics during the fiscal year.

The equipment program's goal and objective did not change with the reorganization. The section is responsible for the development and implementation of statewide activities concerning use, design, and maintenance of specialized forest fire control equipment.

## **Equipment Purchased**

### **Coastal Region**

- Twenty-one (21) Fesco Wheel Plows
- Three (3) 2004 3/4T Extended Cab Chevrolet Trucks
- One (1) 2004 1/2T Extended Cab Chevrolet Truck (BMP program)

### **Pee Dee Region**

- One (1) Fesco Wheel Plow
- One (1) 2004 3/4T Extended Cab Chevrolet Truck
- One (1) 2004 Explorer (Law Enforcement program)
- One (1) 2004 Mini Cargo Van (Radio Tech)
- One (1) 2004 1/2T Extended Cab Chevrolet Truck (FIA program)

### **Piedmont Region**

- Six (6) 2004 3/4T Extended Cab Chevrolet Trucks
- One (1) 2004 3/4T Extended Cab Chevrolet Truck (Law Enforcement program)
- One (1) 2004 1/2T Extended Cab Chevrolet Truck (BMP program)

### **Columbia Headquarters**

- One (1) Mini Passenger Van (Motor Pool)

The Forestry Commission prepared and organized equipment for auction in October 2003. The auction netted the Forestry Commission \$144,697.50. This money was used to purchase equipment.

## **LAW ENFORCEMENT**

The Forestry Commission had 36 commissioned officers including three full time investigators during fiscal year 2004. They are trained and experienced in arson, forest product theft and fraud, and related crime investigations.

During the year, investigators cleared 213 timber transaction cases involving timber valued at \$1,781,472.00. In addition, 69 cases were pending court or pleas at the end of the year, with a timber value of approximately \$350,000.00.

Officers also investigated 1,149 fires, made 318 prosecutions of fire law violations, and 106 miscellaneous prosecutions.



Law Enforcement Report, Fiscal Year 2004

County	Prosecutions					Investigations				Burn Site Inspections	State Forests	
	Outdoor Burning		Woods Arson	Juvenile Cases	Total	Fire	Smoke	Timber Theft/Fraud			Prosecutions	Fines
	Prosecutions	Fines						Investigated	Settled			
Abbeville	3	\$683.00	0	0	3	5	0	6	5	0		
Aiken	11	\$1,775.00	0	1	12	54	3	25	24	1		
Allendale	0	\$0.00	0	0	0	14	1	0	0	0		
Anderson	0	\$0.00			0			4	4			
Bamberg	10	\$825.00	0	0	10	29	1	1	1	10		
Barnwell	5	\$150.00	0	0	5	11	0	6	5	1		
Beaufort	4	\$1,015.00	0	1	5	59	3	3	3	2		
Berkeley	12	\$1,875.00	1	2	15	55	4	6	6	7		
Calhoun	8	\$1,050.00	0	0	8	34	0	1	1	5		
Charleston	11	\$1,003.00	1	0	12	57	3	3	1	7		
Cherokee	1	\$125.00	0	0	1	5	0	4	4	0		
Chester	0	\$0.00	0	0	0	3	0	3	3	0		
Chesterfield	0	\$0.00	0	0	0	30	0	3	3	0		
Clarendon	1	\$200.00	0	0	1	12	0	0	0	0		
Colleton	18	\$1,490.00	0	1	19	135	5	17	14	19		
Darlington	18	\$1,350.00	0	0	18	0	0	3	2	0		
Dillion	0	\$0.00	0	0	0	4	0	2	2	0		
Dorchester	7	\$1,512.00	0	1	8	21	3	4	3	8		
Edgefield	0	\$0.00	0	0	0	0	0	0	0	0		
Fairfield	0	\$0.00	0	0	0	1	0	1	1	2		
Florence	8	\$1,083.00	0	0	8	32	0	26	20	0		
Georgetown	12	\$2,343.00	0	0	12	25	16	6	6	16		
Greenville	10	\$100.00	0	0	10	1	0	7	5	1		
Greenwood	1	\$125.00	0	0	1	3	0	1	1	0		
Hampton	0	\$0.00	0	0	0	31	0	1	1	6		
Horry	7	\$350.00	0	0	7	42	0	13	11	0		
Jasper	20	\$3,030.00	0	1	21	99	0	1	1	3		
Kershaw	27	\$1,450.00	0	0	27	44	0	23	14	0		
Lancaster	1	\$150.00	0	0	1	1	0	3	3	0		
Laurens	1	\$200.00	0	0	1	2	0	3	3	0		
Lee	3	\$1,025.00		0	3	3	0	4	3	0		
Lexington	3	\$696.00	0	1	4	9	0	9	7	0		
Marion	1	\$125.00	0	0	1	6	0	3	3	0		
Marlboro	5	\$375.00	0	0	5	9	0	4	3	0		
McCormick	0	\$0.00	0	0	0	2	0	1	1	0		
Newberry	1	\$100.00	0	0	1	7	0	3	3	0		
Oconee	19	\$8,000.00	0	0	19	27	0	3	3	8		
Orangeburg	17	\$3,455.00	1	1	19	102	4	4	4	49		
Pickens	30	\$2,997.00	0	0	30	24	0	10	10	8		
Richland	3	\$375.00	0	0	3	10	0	12	8	2		
Saluda	0	\$0.00	0	0	0	11	0	1	1	0		
Spartanburg	1	\$25.00	0	0	1	6	0	4	4	4		
Sumter	4	\$827.00	0	0	4	41	8	6	5	15		
Union	1	\$50.00	0	0	1	5	1	4	4	0		
Williamsburg	16	\$1,515.00	0	0	16	58	1	5	5	0		
York	6	\$550.00	0	0	6	20	0	2	2	10		
Manchester											67	\$15,962.50
Sandhills											38	\$5,815.00
Harbison											1	\$125.00
Totals	306	\$41,999.00	3	9	318	1149	53	251	213	184	106	\$21,902.50

## FOREST MANAGEMENT

There are 12.3 million acres of commercial forestland in South Carolina. According to the 2000 U.S. Forest Service Survey, farmers and non-industrial private owners own 74% of this land. Forest industry owns approximately 16% with 10% in public ownership.

The Forest Management Section assists South Carolina citizens with management and development of the forest resources of the state. Programs include woodland management assistance, reforestation assistance, forestry services, forest products utilization and marketing assistance, resource conservation and development, and urban & community forestry. These programs assist owners in growing more timber, aid industries in more efficient utilization of the timber resource, and foster conservation and multiple use of the forest resource. The urban & community forestry program strives to help local government, educational institutions and non-profit organizations develop and enhance the benefits provided by trees and greenspace where we live and work.

In addition to programs designed to assist private landowners and local communities, the Forest Management section also coordinates development and management of almost 90,000 acres of forests included in the state forest system. These lands are owned by the Forestry Commission and provide forest based recreation opportunities and serve as examples of the benefits of active forest management.

### **FOREST MANAGEMENT ASSISTANCE**

Professional foresters from the Forestry Commission provide forest management advice and assistance to landowners. The land is examined and a written forest management plan is prepared. Recommendations for management may include such silvicultural practices as forest protection, reforestation, harvesting, prescribed burning, wildlife habitat improvement, and recreation.

This year, 1785 management plans were prepared for 112,659 acres. Beginning in July of 1999, customer satisfaction surveys were sent to every landowner that received a forestry management plan. In FY 04, 93% of the landowners that responded to the survey indicated that they were satisfied with the management plan they received. Of these landowners, 91% also indicated that they intended to complete most or all of the recommendations in their plan. Where practical, the landowner is referred to consulting or industrial foresters to assist in carrying out management recommendations. This year 206 cases were referred to consulting foresters and 39 to industrial foresters.

### **COST SHARE PROGRAMS**

#### **Forest Renewal Program (FRP) - State**

In 1982 the program was funded for the first time by a \$100,000 state appropriation. This permitted an assessment of \$400,000 from forest industry, and created a \$500,000 Forest Renewal Fund. The state funding was doubled effective July 1, 1996. This increase permitted an assessment of \$800,000 increasing the program to \$1,000,000. Beginning in 2001, the objectives of the Forest Renewal Program were expanded to include providing funds to help match federal grants that provide financial support for the Forest Inventory and Analysis (FIA) program.

#### **Forest Incentives Program (FIP) - Federal**

This program was eliminated in the 2002 Farm Bill. Accomplishments this year are the result of carry-over funds.

### Conservation Reserve Program (CRP) - Federal

The Program began with crop year 1986 and was renewed with the passage of the 2002 Farm Bill.

#### Statewide Accomplishments For All Cost-Share Programs Reforestation and Timber Stand Improvement

Program	Number of Landowners	Acres Planted	Natural Regeneration	TSI Acres	Cost Share Payments
FRP	300	8,773	11	2815	\$764,171
FIP	57	1698	0	0	\$118,418
CRP	265	5,554	0	0	\$368,508
<b>Totals</b>	<b>622</b>	<b>16025</b>	<b>11</b>	<b>2815</b>	<b>\$1,251,097</b>

#### SEEDLING SURVIVAL

Survival checks were made on 10 percent of plantings using a row count or tenth acre plot method for determining survival. An average of all survival checks was used to determine the statewide survival of 84% for loblolly pine plantings. Survival rates for longleaf pine plantings were tabulated separately. Plantings with longleaf seedlings had a survival rate of 73%.

### Forest Management Assistance 2003-2004

County	Non Cost-Share		Cost-Share		Forest Stewardship	
	Exams	Acres	Exams	Acres	Exams	Acres
Abbeville	11	386	5	239	0	0
Aiken	20	1,607	31	1,353	3	308
Allendale	6	697	8	465	0	0
Anderson	105	3,744	0	0	0	0
Bamberg	8	699	20	962	7	1,514
Barnwell	31	2,350	58	3,028	1	170
Beaufort	4	527	1	100	1	275
Berkeley	26	7,876	7	616	1	764
Calhoun	23	1,497	83	5,678	0	0
Charleston	30	1,780	10	357	0	0
Cherokee	14	349	11	364	1	357
Chester	17	1,760	12	424	0	0
Chesterfield	31	1,599	23	706	2	502
Clarendon	3	119	30	839	0	0
Colleton	8	224	3	73	2	605
Darlington	5	177	6	340	2	197
Dillon	15	1,515	6	138	0	0
Dorchester	23	1,658	12	260	0	0
Edgefield	5	224	6	3,231	1	185
Fairfield	7	827	15	912	6	1,852
Florence	40	1,923	32	1,004	4	1,012
Georgetown	9	611	7	253	0	0
Greenville	21	718	11	707	1	18
Greenwood	4	230	1	100	0	0
Hampton	12	1,434	8	334	4	551
Horry	29	2,414	31	842	2	684
Jasper	5	714	6	820	0	0
Kershaw	9	386	15	524	2	650
Lancaster	19	901	7	303	0	0
Laurens	23	1,103	1	17	1	128
Lee	8	1,082	3	99	1	196
Lexington	10	277	12	277	2	48
Marion	11	773	7	244	2	215
Marlboro	9	663	12	474	1	1,050
McCormick	5	1,009	0	0	1	234
Newberry	23	986	27	1,256	1	70
Oconee	30	2,210	2	144	2	294
Orangeburg	45	3,533	219	10,686	10	1,167
Pickens	19	502	0	0	0	0
Richland	8	262	8	306	3	960
Saluda	25	1,491	37	1,303	1	115
Spartanburg	26	1,018	9	366	0	0
Sumter	4	244	21	1,185	0	0
Union	5	355	11	722	0	0
Williamsburg	19	542	44	1,874	5	589
York	14	654	12	1,021	1	300
<b>State Totals</b>	<b>824</b>	<b>55,648</b>	<b>890</b>	<b>42,038</b>	<b>71</b>	<b>14,973</b>

## FOREST SERVICES

Through this program the Commission provides assistance to landowners and other state agency lands with afforestation, reforestation, and maximization of production from their woodlands. The landowner is charged the cost of all services performed.

These services were available to landowners during the year:

**Firebreak Plowing** - performed by Forestry Commission employees using agency equipment for \$80 for the 1st hour and \$55 for each additional hour.

**Prescribed Burning** - performed by Forestry Commission employees using agency equipment for \$12 per acre for the 1st 50 acres, \$10 per acre for the 2nd 50 acres and \$8 per acre for all over 100 acres. Firebreak plowing costs are not included. Minimum fee: \$200.00.

**Prescribed Burning Standby** - an agency tractor and employee on standby at burning site for \$50 for the 1st hour and \$25 for each additional hour while landowner performs burning under an approved plan. Minimum fee: \$100.00.

**Equipment Rental Program** - agency owned tree planters and drum choppers made available to private landowners at rates from \$5 to \$20 per acre.

**Timber Marking** - performed by Forestry Commission employees at the rate of \$8 per thousand board feet and \$3.00 per cord.

Service	Number of Tracts	Units of Measure	Receipts FY 03-04
Firebreak Plowing	475	1,299 miles	\$100,805
Prescribed Burning	88	6,494 acres	\$66,812
Prescribed Burning Standby	20	1,255 acres	\$3,070
Equipment Rental	28	382 acres	\$2,205
Water Bar Construction	2	83 bars	\$545
Timber Marking	1	1,052 cords 153,310 board feet.	\$4,382
<b>Totals</b>	<b>614</b>		<b>\$177,819</b>

Beginning in July of 1999, a customer satisfaction survey was sent to all landowners that received forestry services. In FY 04, 49% of the surveys were returned and 95% of these landowners indicated that they were satisfied with the services they had received.

## **COMMUNITY FORESTRY**

The Community Forestry program exists to provide technical assistance to municipal and county governments in creating, maintaining, and enhancing community forest conservation and management within their jurisdictions; to provide for, coordinate and/or conduct information, education and training regarding community forestry, wildland-urban interface issues, and arboricultural best management practices; to provide financial assistance grants to local governments, non-profit organizations, and educational institutions of higher learning in order to create, enhance and support long-term local, regional and statewide community forestry programs. This assistance is accomplished through a variety of ways: direct contact, diverse and cooperative partnerships, and the financial assistance program.

Expected results include but are not limited to: improved air quality, energy conservation through reduced heat island effect in downtown areas, local government recognition and management of the community tree resource, sustained financial support on the local level for community tree management, more professional public tree managers to provide safe walkways, streets and parks, and more public trees planted and maintained to beautify, cool, and clean South Carolina communities.

### **Community Forestry Financial Assistance and Partnership Program**

The Community Forestry Financial Assistance and Partnership Program is a state program that is funded on the federal level by Congress with monies funneled through the U. S. Forest Service. Pass-through funds in the amount of \$230,000 were awarded to municipal and county governments, non-profit conservation organizations, and educational institutions to assist in the creation, enhancement and support of long-term local, regional and statewide community forestry programs. Specific project types include but are not limited to: educational tree planting, public tree ordinance development, community forest management plans, community forestry staffing, and training and continuing education.

### **Tree City/Tree Line USA**

Sponsored on the national level by the National Arbor Day Foundation and others, the Tree City USA program is administered in South Carolina by the SC Forestry Commission. This program seeks to stimulate and promote the management of community trees by recognizing towns and cities which meet the following criteria: (1) establishment of a municipal tree care ordinance, (2) expenditure of at least two dollars per capita on their community forestry program, (3) establishment of a legally constituted tree board or permanent staff to address tree issues, and (4) observance of Arbor Day by a mayoral proclamation and official ceremony. The SC Forestry Commission has recognized and awarded 33 municipalities, 1 county and 3 military bases under the Tree City USA program during 2004.

The Tree Line USA program, also sponsored by the National Arbor Day Foundation, seeks to stimulate and promote proper utility line clearing and safety techniques of private and public utility companies. In order to qualify as a Tree Line USA, a utility must meet three criteria: (1) perform quality tree care regarding pruning, trenching and tunneling methods, (2) provide opportunities for annual utility line worker training, and (3) sponsor an ongoing community tree planting program to include an Arbor Day celebration and at least one educational mailing to customers. The Forestry Commission recognized the Gaffney Board of Public Works as South Carolina's only Tree Line USA utility for the fifth consecutive year.

### **Partnership Development and Educational Programs**

Through the direct technical assistance of the community forestry staff and implementation of the Financial Assistance projects, the program strives to develop partnerships with a variety of organizations and units of local government. Often these partnerships result in educational programs regarding the economic, ecological and social value of community forest resources. During FY 04, 134 partnerships were developed and 83 different educational sessions were presented to approximately 8,000 South Carolinians, both youth and adults.

<i>Types of Technical Assistance</i>	<i>Program Accomplishments Community Forestry Staff</i>			<i>Program Accomplishments Financial Assist. Grants</i>
	# of Customers	# of Assists		# of grants awarded
<b>Program Development/Expansion</b>				
Municipal Governments	41	96		16
Non-profit organizations	37	74		3
Educational Institutions	11	31		9
State/County Governments	<u>22</u>	<u>67</u>		<u>4</u>
<b>TOTALS</b>	<b>111</b>	<b>268</b>		<b>32</b>
<b>Public Tree Ordinances Developed</b>	<b>1</b>			<b>2</b>
<b>Urban Forestry Cultural Practices</b>				
Commercial/Business	16			NA
Residential	75			NA
Public Agency	<u>27</u>			NA
Total # of Assists	<b>118</b>			
<b>Public Trees Inventoried</b>	NA			<b>23,409</b>
<b>Public Trees Planted</b>	NA			<b>2,429</b>
<b>Tree City USA's</b>	<b>36</b>			<b>1</b>
<b>Demonstration Planting Projects</b>	<b>5</b>			<b>8</b>
<b>Partnership Development</b>	<b>28</b>			<b>106</b>
<b>Public Information/Education</b>	Adults	Youth	Totals	Totals
# Programs	43	18	<b>61</b>	<b>21</b>
# of people	1,239	2,473	<b>3,712</b>	<b>4,378</b>
# of hours	85	38	<b>123</b>	<b>1,068</b>
# of seat hours	1,805	2,828	<b>4,633</b>	<b>12,596</b>

## **FOREST STEWARDSHIP**

The Forest Stewardship Program is a cooperative effort among the USDA Forest Service, Forestry Commission, other natural resource agencies and organizations, forest industry, and private forest consultants in South Carolina to encourage the long-term stewardship of non-industrial private forest lands. Landowners are provided technical assistance by having a multiple resource management plan developed for their property addressing their management objectives.

During FY 04, 150 Stewardship Plans were written in South Carolina on 35,326 acres. The plans were written by the following cooperators: S.C. Forestry Commission/ DNR- 71 plans; Forest Consultants- 93 plans; and Forest Industry- 3 plans.

Eighteen landowners (comprising 7066 acres) were certified for FY04.

## **STATE LANDS MANAGEMENT**

The State Lands Forest Management Program was created to provide professional forest management assistance to South Carolina state agencies that own timberlands. During fiscal year 2003-2004, five agencies requested assistance from the state lands coordinator. The agencies and facilities were as follows:

Department of Natural Resources  
Webb Wildlife Center  
Donnelley Wildlife Management Area  
Yawkey Wildlife Management Area  
Jocassee Gorges  
Shooting Tree Ridge WMA  
Santee Reserve  
Department of Juvenile Justice  
White Pine Wilderness Camp  
Department of Disabilities and Special Needs  
Whitten Center  
Midlands Center  
Department of Mental Health  
Crafts Farrow Complex  
SC Educational Television

Timber Revenue

One state-owned tract was marked or cruised for timber sales and produced an estimated volume of 522,411 board feet of pine sawtimber. Additionally, one timber sale was held during FY2004, generating a total of \$41,550 in revenues.

## **SAND HILLS STATE FOREST**

Sand Hills State Forest (SHSF) covers approximately 46,000 acres with 45,000 acres in Chesterfield County and 1,000 acres in Darlington County. The forest was operated under a use agreement with the federal government from 1939 until 1991. In July of 1991, title to Sand Hills State Forest was transferred to the South Carolina Forestry Commission.

### **Receipts**

Since 1967, Sand Hills has been totally self-supporting. No appropriations were received for H. Cooper Black Recreation Area in FY 2004.



<b>Activity</b>	<b>Receipts</b>
Timber Sales	\$384,133.02
Pinestraw Sales	\$498,936.07
Stump Sales	\$8,596.06
Rent State Owned Equipment	\$375.00
Wildlife Management Area Payments	\$27,351.14
Rent State Owned Property	\$2,040.00
User Fees (includes permit sales from PRT)	\$21,462.65
Prior Yr Refund	\$3,253.81
Donation	\$1.00
Sale of Recyclables	\$67.60
<b>Total</b>	<b>\$946,216.35</b>

Note: 25% of \$940,478.94 was paid to Chesterfield and Darlington County School Systems. Sale of recyclables, donations, prior year refunds, and rental income categories are not included when calculating the total to be dispersed to the school systems.

Chesterfield County Schools     \$229,476.87  
Darlington County Schools     \$ 5,642.87  
Total     \$235,119.74

### **Silvicultural Practices**

Site preparation for planting longleaf pine by disking and V-blading was completed on 101 acres. These areas were in slash pine. Containerized longleaf seedlings were planted on 310 acres. These areas were formerly farm rental fields that were converted to longleaf pine.

The following species and number of seedlings were planted:

Containerized Longleaf Pine	325,000
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In 1999 Sand Hills started a pinestraw enhancement program. Under this program an individual can enter into a four-year agreement with the Forestry Commission to control scrub hardwoods to enhance pinestraw production. The individual agrees to eradicate 90% of all hardwoods on a tract of land using chemicals. In exchange, that person may harvest all the straw that falls during the 4 years of the agreement. After the agreement expires, the acreage becomes part of SHSF's quality straw production program. The straw from these areas is offered for sale on a lump sum sealed bid basis at three-year intervals. Currently there are 7 individuals working on approximately 13,955 acres of land. The enhancement work on 4,738 acres has been completed. The value of the pinestraw in the year 2005 will approach \$1,000,000.

### Pinestraw Enhancement Program

<b>Fiscal Year</b>	<b><u>Contracts</u></b>	<b>Acres</b>
1999	15	4,565
2000	29	5,635
2001	25	6,922
2002	5	1,104
2003	3	467
2004	15	2,147
<b>Total</b>	<b>92</b>	<b>20,840</b>

As result of increased pine straw activity at Sand Hills State Forest, a vehicle registration system was implemented to ensure that licensed, insured vehicles were operating on the Forest. The registration stickers provide a visible means to those patrolling the Forest that the participant has complied with the program. The program started in FY 2003. Negotiated and advertised contracts require an orange sticker for vehicles. Enhancement contracts require a yellow sticker. This year shows a decrease in the number of stickers issued. Four hundred fifty six (456) were issued in 03. This year two hundred thirty six (236) were issued.

A total of 3,100 acres were prescribed burned for wildlife habitat enhancement, hardwood control and fuel reduction. Smoke management limitations and weather limited the number of acres burned this year.

#### **Forest Protection**

Sand Hills State Forest had one wildfire that burned 25 acres in FY 04. The fire was caused by lightning.

Boundary lines were located with a GPS unit and mapped by a professional surveyor in Compartment 11, 12, and 13. Within these compartments, property lines were marked and signed and corners were located and marked with metal corner posts.

#### **Recreation/Education**

Recreational use of the Forest continues to escalate. Hunting, fishing, horseback riding, mountain biking, hiking, bird watching and camping continue to be favorite activities.

ATV use was discontinued July 1, 1999 based on an opinion from the attorney general's office. Environmental studies and mapping on a planned 5,000 acre off highway vehicle (OHV) trail continue. U.S. Fish and Wildlife Service must approve the OHV plan before it can be completed.

The Headquarters Mountain Bike Trail continues to attract riders from the surrounding areas. Sixty nine permits were issued for bike riding.

At Sugarloaf Mountain, there are 7 primitive camping sites for family camping and 8 primitive equestrian campsites. Sand Hills' personnel booked 268 reservations for these sites this year. An estimated 4,986 visitors with

1,281 horses used the campsites and trails. This represents an overall gain in attendance and number of reservations. This fiscal year is the first time ever that a fee was charged for use of facilities at Sugarloaf. This year a fee of \$10 per site for those sites with shelters was implemented.

Cooper Black Recreation area continues to grow. There are now 52 campsites for RV campers. Twenty-seven have electricity and water hookups. The remaining sites are maintained as primitive sites. A clubhouse, kitchen, horse barn, full size arena, two comfort stations, and a dump station are available for use. Twenty-seven more corrals were installed this year bringing the total to sixty-three. Five hundred dogs can be housed in the dog pens just miles from the camp area.

Twenty-five weekend events were scheduled at Cooper Black. Reservations for sites at Cooper Black showed an increase from the previous year. Thirteen hundred sixty nine (1,369) reservations were booked. Reservations are required for campsites, stalls, corrals, training sites, arena, clubhouse, kitchen and grounds. Receipts from all reservations and other fees totaled \$45,965.00.

#### Summary of Sand Hills State Forest Recreation Areas

<u>Year</u>	<u>Cooper Black Reservations</u>	<u>Sugarloaf Reservations</u>	<u>Total</u>	<u>Cooper Black Visitors/Horses</u>		<u>Sugarloaf Visitors/Horses</u>		<u>Total Visitors/Horses*</u>	
FY 1999	129	284	413	3,000	815	3,000	1,000	6,000	1,815
FY 2000	504	316	820	3,790	1,662	3,674	1,025	7,464	2,687
FY 2001	711	307	1,018	4,024	1,304	3,456	932	7,480	2,236
FY 2002	874	283	1,157	5,000	1,580	4,200	866	9,200	2,446
FY 2003	1226	228	1,454	4,883	1,175	2,776	499	7,659	1,674
FY 2004	1,369	268	1,637	8,849	2,037	4,986	1,281	13,835	3,318

*\*Number of Visitors and Horses does not include day users, nor does it include any visitors from any other user group.*

Trail use permits increased from 1,240 permits in FY 2003 to 1246 in FY 2004. Revenue from trail use permits totaled \$21,462.65.

Free-use permits are issued for any activity at Sand Hills State Forest that does not have a fee. Sand Hills' staff issued 192 this year. Twenty-eight (28) of the permits were for raking pinestraw for personal use, forty-one (41) for gathering firewood, and the remaining 123 were for camping.

As a result of community meetings, Sand Hills began a vehicle registration system for state forest users that wanted access to roads that had restricted use. The program began in December 2003. One hundred seventy (170) vehicles were registered this year. The majority of the users were hunters.

<b>Year</b>	<b>Trail-Use Permits</b>	<b>Free-Use Permits</b>	<b>Total</b>
FY 1998	271	217	480
FY 1999	505	329	834
FY 2000	573	412	985
FY 2001	839	299	1,138
FY 2002	932	335	1,267
FY 2003	1,240	255	1,495
FY 2004	1,246	192	1,438

The permit holders hailed from 85 cities in South Carolina, 68 cities in North Carolina, 2 cities in Ohio, 5 cities in Virginia, 5 cities in Alabama, 1 city in California, 3 cities in Georgia, 6 cities in Tennessee, 3 cities in Maryland, 1 city in Florida, 1 city in Alabama, and 1 city in New Hampshire. One holder was from Ontario, Canada and one was from South Africa.

Francis Marion University continues using Sand Hills as a place to bring botany students for hands-on plant identification. Professor Jerry Long gave hands on instruction to 38 students this year on 4 visits to Sand Hills.

Dr. Bill Alexander from the Governor's School of Science and Mathematics in Hartsville brought 2 classes to SHSF this year. In the fall he brought a vertebrate biology class of 12 to look at fish and other vertebrates. In the spring he brought an ornithology class of 9 students for bird identification.

A group of students from Warren Wilson College came to Sand Hills to learn more about the Red Cockaded woodpecker and forestry management.

Fifteen scout groups used Sugarloaf Mountain for their weekend campouts. Numerous church groups used Sugarloaf Mountain shelters for picnics and retreats. Sugarloaf Mountain continues to be a favorite place for many family reunions.

West Florence High School Track Team used H Cooper Black as a training site for cross-country training. Twenty team members trained for 2 days.

Mr. Bill Truman of the Florence County Track Club brought several students to train for the Junior Olympics team.

Brian Scholtens from the College of Charleston traveled to SHSF to collect insects.

Jerry Shrum brought the Teachers Tour to SHSF again this year.

Two biology classes with 40 students from Coker College visited SHSF for a Forest Management/RCW presentation.

A forestry/wildlife presentation was done at Pate Elementary School in Darlington for 125 first grade students.

Brian Davis presented a short program to a group of 40 special need students that spent the day at Sand Hills exploring and picnicking.

## **Wildlife Management**

Approximately 40,000 acres of the Forest is included in the Wildlife Management Area Program. This is a cooperative agreement between the Department of Natural Resources (DNR) and the S.C. Forestry Commission. DNR personnel provide assistance with the game food plot establishment; monitoring deer herd dynamics, tracking various game and non-game species, and pond management. Law enforcement on the forest is provided through interagency cooperation. Sand Hills has a 57acre public dove field. Thirty-five acres of the 57acre field were planted to annual crops with the remainder planted and maintained in bicolor lespedeza.

Sixty acres of Bahia-grass off of TT 19 were planted, fertilized and limed at the recommended rate. This area will be used as a field trial area at H. Cooper Black (HCB). Two hundred Crabapple trees and 250 Chickasaw plum trees were planted in the Bahia fields at HCB to improve the wildlife habitat. The National Wild Turkey Federation planted three plots of sawtooth oak with a total of 75 trees.

Replacement of water control structures and dam improvements were completed on Darlington and Scott ponds which improved duck hunting and fishing. Darlington, Scott, Middendorf, Sexton and Campbell ponds were drained and restocked with bream and bass at the recommended rate.

Eighty-two acres (125 plots) were planted as wildlife food plots. These plots were planted in chufa, corn, sunflower, spring game mix, dove mix, dove proso, wild turkey mix, quail mix, sorghum, and bicolor. All plantings were fertilized and limed at the recommended rates. All manageable bicolor patches in compartments 11, 12, 13 and the HCB area were bush hogged, fertilized, and limed. Three local volunteers worked approximately 480 man-hours with the Sand Hills staff planting and maintaining wild life food plots.

Quail Unlimited supplied \$1,000 worth of seed and fertilizer that Sand Hills staff used to establish and maintain 12 wildlife openings for quail.

Sand Hills continues to conduct surveys for DNR. Furbearers, fox squirrel, turkey and quail were surveyed to track population trends.

## **Rare, Threatened and Endangered Species Management**

Red Cockaded Woodpeckers

### Population Trends

The number of active clusters on SHSF increased slightly from 2003 at 61 clusters, but the number of potential breeding groups remained stable at 55. The number of solitary males increased slightly from 3 to 4. There are currently 61 active clusters, 8 inactive clusters, of which 5 can be considered recruitment clusters on SHSF. One cluster is currently considered to be a relict cluster.

### Management Activities

Fifty-three nesting attempts were made by 50 groups so far in 2004; 43 of these attempts produced viable offspring. The average clutch size for 2004 was 3.19. Ninety-eight chicks have been produced so far in 2004, the highest number to be produced on SHSF since we have been monitoring the population.

Habitat improvement continued through mechanical and chemical treatments in pinestraw enhancement areas.

### Management Implications

The 2004 breeding season on SHSF has been the most successful since SCDNR started monitoring the population. The increases are probably due to habitat changes that have taken place on the forest. Population increases on SHSF fell short of Recovery Plan standards in 2004. However, the 5-year average growth rate for 2004 was near the goal of 5% growth. The initiation of a vigorous recruitment program will likely result in greater increases over the next few years. Recruitment clusters are to be provided at a rate of 10% of the active number of clusters.

Therefore, we need to supply 6 recruitment clusters for FY 2005. This can be achieved by using existing inactive recruitment clusters and the creation of 1 new recruitment cluster.

### Research

A longleaf pine natural regeneration research project in conjunction with the U.S. Forest Service is still ongoing and has been in effect for 25 years.

A professor from Clemson University set up a turkey litter/water quality survey on the forest in 1999. The professor is now at the University of Georgia but continues the study at Sand Hills.

A sludge research project is on going. A four-year cycle that was started in 1999 continued this year. Turkey litter was added to the study site for comparison with sludge and commercial fertilizer applications and their effects on tree growth and soil chemistry.

## **MANCHESTER STATE FOREST**

Manchester State Forest, located in Sumter County and Clarendon County, is currently comprised of approximately 25,800 acres. From 1939 to 1955, Manchester was leased by the State of South Carolina from the federal government and managed by the South Carolina Forestry Commission. The State received title to the property on June 28, 1955.

### Receipts

<b>Activity</b>	<b>Receipts</b>
Timber Sales	\$438,302.86
Land Lease Payments	\$32,043.30
Wildlife Management Area Payments (Two Years)	\$71,155.39
Trail and Special Use Permits	\$38,167.65
<b>Total</b>	<b>\$579,669.20</b>

Note: 25% of all forest receipts paid to Sumter and Clarendon Counties for a total of \$144,917.30. Timber sales were concentrated on thinnings in overstocked stands and conversion of older slash pine stands to longleaf plantations.

### Silvicultural Practices

Approximately 87 acres of recently harvested areas were planted with longleaf pine, and 30 acres were replanted due to poor survival. The following species, number of trees and acres were planted:

<u>Species</u>	<u>Trees</u>	<u>Acres</u>
Containerized Longleaf Pine	73,000	117

1,591.3 acres of longleaf pine stands were placed under a pine straw enhancement program utilizing three (3) vendors.

A total of 78 acres were prescribed burned for site prep, hardwood control and fuel reduction.

### Forest Protection

Two (2) wildfires occurred burning approximately 35 acres with minimal damage. Firebreaks were maintained on those areas that were either high risk or of high value. Manchester personnel responded to several fires outside the forest boundaries to assist to regional fire personnel.

One thousand twenty-one acres were salvaged due to ice storm damage in late January of 2004. Approximately 12,767 tons (4,773 cords) of pulpwood and 9,667 tons (3,614 cords) of sawtimber were recovered for a total salvage value of \$309,879.14.

### **Recreation/Education**

Recreational use of the forest continues to escalate over previous years. Hunting, fishing, horseback riding, motorcycle/ATV riding, mountain biking, and use of the rifle/pistol range continue to be favorite activities. Six special-use permits were issued for organized events with approximately 1,600 paid participants. Manchester staff participated in four educational programs including Wood Magic, school programs, and Palmetto Pride.

An organized clean-up comprised of 70 volunteers was held on Manchester which resulted in 10.5 tons of trash being picked up. Those participating included Palmetto Pride, Clemson Extension, Sumter County, Shaw Air Force Base, and numerous volunteers from the various recreational groups as well as Manchester State Forest personnel.

Work continued on the "High Hills" section of the Palmetto Trail concentrating on re-decking trestles on the Norfolk-Southern Railroad bed, which crosses the Wateree Swamp. Several units of Americorps work groups were used as well as prisoners from the work release program at Wateree Correctional Institute.

Four meetings of the Manchester Recreational Advisory Council were held resulting in the addition of 11 miles of equine trails and 12 miles of bicycle trails along with the adoption of associated safety rules for night riding.

### **Wildlife Management**

Approximately 25,000 acres of the forest are presently included in the Wildlife Management Area Program through a cooperative agreement between the Department of Natural Resources (DNR), and the South Carolina Forestry Commission. DNR provided technical assistance with game food plot establishment monitoring and dove fields. They also agreed to establish and plant a 150-acre dove field on the Oak Lea Tract. The draw hunts at Oak Lea also increased in popularity as evidenced by the increased number of applications. Game harvests remained basically unchanged from the previous year.

Manchester also hosted its annual youth dove hunt on the Bland Tract, which was limited to 35 youths who were required to register in advance.

During the year, DNR provided technical assistance with deer herd dynamics, tracking various game and non-game species including quail, turkey, and fox squirrels and pond management. DNR also assisted in law enforcement on the forest through interagency cooperation. Three spotlight surveys were conducted as well as the collection of biological data from the organized dog hunts.

Planting and maintenance was conducted on 370 acres of wildlife areas. Corn, popcorn, sunflowers, sorghum-browntop-millet-benne mix, wheat, rye, clover, vetch and bicolor were utilized to diversify the food supply. Seed for several of the plantings were donated by the Department of Natural Resources and planted by Manchester and DNR personnel.

### **Rare, Threatened, and Endangered Species Management**

Manchester currently maintains six (6) clusters of Red Cockaded Woodpeckers. Colony sites continue to be monitored along with scouting for new cavity and start trees in cooperation with biologists from the neighboring Poinsett Gunnery Range (USAF). An agreement was reached with the USAF that would allow them to monitor and work on the colony sites only with prior agreement with the Manchester State Forest director.

### **Research**

Manchester continues to cooperate with the SCFC Nursery Section by providing eight (8) sites for clone banks, seed orchards, and progeny tests.

**Infrastructure**

An agreement was initiated with the South Carolina National Guard for the improvement and/or replacement of bridges, culverts, and roads on the Beidler Tract on Manchester as well as the Wee Tee Tract. To date, 15 culverts have been replaced and 2 bridges re-decked as well as 5 miles of roads being surfaced with rock under this agreement.

**WEE TEE STATE FOREST**

Wee Tee State Forest, located on the Santee River in lower Williamsburg and Georgetown Counties, was acquired by the South Carolina Forestry Commission in November of 2003 through the partnership of eight participants. These partners included the South Carolina Forestry Commission, South Carolina Department of Natural Resources, The Conservation Fund, U. S. Forest Service, Forest Legacy Program, U. S. Fish and Wildlife, North American Wetlands Conservation Act Grant, Ducks Unlimited, National Wild Turkey Federation, and Anheuser-Busch. Wee Tee contains 12,394 acres of which 770 acres is comprised of planted loblolly pine plantations and upland pine-hardwood types. The remaining 11,624 acres is comprised of bottomland hardwood types with the associated oxbow lakes and creeks. As part of the Santee River Focus Area of Ducks Unlimited's Lowcountry Initiative, it is a very significant, un-fragmented bottomland hardwood forest. Its significance lies in its watershed and water supply protection, habitat for wildlife and a number of threatened and endangered species and the opportunities it provides for recreation, forest practices and education.

**Receipts**

No income was generated on Wee Tee State Forest during this fiscal year.

**Silvicultural Practices**

None for fiscal year 2004

**Recreation/Education**

Fishing in the Wee Tee Lakes was opened in April, 2004 on Wednesdays and Saturdays from sunup to sundown. Manchester State Forest personnel opened and closed the gates to the three boat landings for this opportunity.

A hunting season was planned with SCDNR and will be implemented starting in September 2004.

Canoeing and kayaking will also be allowed at those times when the Wee Tee Lakes are open.

Funds have been secured and tentative plans have been made to construct a permanent boat landing and parking lot in cooperation with SCDNR.

**Forest Protection**

Gates have been constructed and placed on all known entrances into Wee Tee. Contracts for property boundary marking and signing are currently being bid.

**Wildlife Management**

An agreement has been reached with SCDNR to place Wee Tee under the WMA program according to a pre-closing cooperative arrangement.

**Infrastructure**

Through an agreement with the S. C. National Guard, three culverts have been installed, one bridge has been re-decked and the 122nd Engineering Company has surfaced approximately three miles of roads with rock. Manchester State Forest personnel also made road improvements to Sanders Landing with material left by the previous owner.

Renovations were made to the existing metal building, which will be used as a work center.



## **HARBISON STATE FOREST**

Harbison State Forest, located approximately 9 miles from downtown Columbia, encompasses 2,176 acres. The forest was purchased in 1945 and became the site of the agency headquarters in 1963. Following the adoption of a Master Plan in 1981, the Forest began to be developed as an Educational State Forest. Recreational use grew markedly in the early 90's with Harbison soon gaining the reputation as a mountain biking mecca for the area.

### **Receipts**

Parking fees were initiated in March 2004 to provide more equity with regard to user fees. Since 1997, bicyclists have been required to purchase daily or annual permits while hikers, runners, picnickers, and other forest users were not required to pay fees. Fee boxes were installed at all trailheads in February 2004 to allow visitors to purchase parking permits without assistance.

Activity	Receipts
Shelter Rentals	\$1,375.00
Conference Room Rentals	\$11,250.00
Bike Permits	\$24,600.00
Special Use Permits	\$425.00
Parking Permits	\$1,125.00
Total	\$38,775.00

Note: 25% of all receipts except facility rentals are paid to Richland and Lexington County School Systems. This amounted to \$7,819.70 for the 2003-2004 fiscal year.

### **Silvicultural Practices**

Although natural re-seeding will restock most areas in which pine beetle salvage took place during the 2002 southern pine beetle outbreak, approximately 11 acres were planted during January 2003. Four areas on the Forest were deemed large enough to merit artificial regeneration. Of these, 2 areas totaling 4 acres were planted with bareroot loblolly pine (second generation) and the remaining 7 acres were planted with containerized longleaf pine. Survival of planted seedlings was good to excellent, with natural re-seeding of loblolly abundant in all 4 areas. Control of competing hardwoods and pines is being considered for these areas to demonstrate several management options for private landowners.

A one-acre prescribed burn was conducted during March 2004 to serve as a demonstration area. A photo point was established and maintained weekly for 3 months to show the process of greenup following the burn.

### **Forest Protection**

No forest fires occurred on Harbison State Forest during this fiscal year. Individual tree mortality returned to a normal level following the 2002 southern pine beetle outbreak. Trees that were considered hazardous to Forest visitors and/or to buildings were felled as workload allowed. (Many of these trees were removed during chainsaw training conducted by the Forestry Commission Training Section.)

### **Recreation/Education**

Several events were held on the trails at Harbison during the 2003-2004 fiscal year. A mountain bike race was held in October in which approximately 75 individuals participated. An adventure race was held in February that involved about 35 participants. The largest event was an International Mountain Bicycling Association (IMBA) workshop that was held in April. IMBA trail experts helped Forest staff set priorities with regard to trail maintenance and re-routing, then planned and conducted a workshop on sustainable trails for 65 participants. This workshop was followed by a "Hit the Trails Day," in which 3 local bike dealers and numerous volunteers encouraged Forest visitors to try out mountain biking and/or hiking. It was estimated that over 150 citizens participated in this promotional event.

In addition to these events, 8 trail work days were conducted during the 2003-2004 fiscal year. These events included the re-routing of approximately 1 ½ miles of trail, rehabilitation of numerous wet areas on the trails, and pruning of overhanging branches and brush. Volunteers also constructed a new 2 ½ mile technical bicycle trail, bringing the total mileage of hiking and biking trails to 20 ½ miles on Harbison.

A Friends of Harbison State Forest non-profit group was formed in April 2004. This group is an offshoot of the Trails Working Group that met regularly during 2003. After electing officers and developing a mission statement, the group filed for recognition from the Secretary of State and is currently seeking 501(c)3 status from the IRS. The mission of the Friends group is to “preserve and promote the recreational and educational aspects of this urban forest resource.” They meet monthly at the Environmental Education Center to plan and conduct trail maintenance work days as well as to pursue methods of promoting Harbison State Forest. Current membership of this group is about 20 individuals.

Boy Scouts continue to provide assistance to Harbison through Eagle Scout projects and Cub Scout activities. Prospective Eagle Scouts completed 3 projects during 2003-2004 that included the installation of 6 trail benches, 2 bridges, and the construction of ½ mile of new trail. Numerous educational programs were conducted for Scouts and others at Harbison State Forest. See the Education and Information Technology section of this report for details.

Scouts and other organized groups continue to use the four primitive camping facilities at Harbison. Sixty-seven groups used the camping facilities for a total of 1,420 campers.

#### **Wildlife Management**

Five wildlife viewing areas totaling 2 ½ acres are maintained each year. These areas are planted in cover crops such as wheat, rye, and clover to facilitate the viewing of wildlife by Forest visitors.

#### **Rare, Threatened, and Endangered Species Management**

No threatened or endangered species are known to occur on Harbison State Forest. During May 2004, two vernal ponds were established with the aid of USDA Forest Service personnel. These ½-acre wetlands provide habitat for amphibians, reptiles, and many species of insects and served as the focal point of a 3-day workshop held at the Environmental Education Center.

#### **Research**

Clemson University has made initial contact with the Forest Director to conduct disease vector research on Harbison that will involve trapping of field mice. USDA Forest Service personnel installed a series of bat boxes in 2002 that are periodically checked for use.

### **POE CREEK STATE FOREST**

Poe Creek State Forest is located in Pickens County adjacent to SC Highway 11 and contains 1806 acres. The property was purchased from Crescent Resources, Inc. on April 6, 1999. Approximately 800 acres under forest management with 610 acres of planted pine and 190 acres that have been clear-cut and allowed to regenerate naturally to native hardwood species

The remaining 1006 acres are in natural upland hardwood type and a mixture of white pine and hardwood. The steep terrain in this area will limit the forest management activities that can be implemented.

#### **Receipts**

Timber Sales	\$28,109
Wildlife Management Area	\$10,269
Total Receipts	\$38,378

## **RESOURCE DEVELOPMENT**

The Resource Development Division was created in July 2003 to bring together agency programs that support the sustainable development of South Carolina's forest resource. The Forest Inventory and Analysis program provides up-to-date, accurate forest resource information to the forestry community. The existing forest products industry is supported and new industry is recruited through the agency's Business Development efforts. The Environmental Management program works with forest industry to ensure that forestry activities are carried out in a manner that protects water quality and soil productivity. The Nursery and Tree Improvement program provides top-quality seed and seedlings to forest landowners to meet reforestation needs.

### **FOREST INVENTORY & ANALYSIS**

The Forest Inventory and Analysis (FIA) program is a cooperative program with the US Forest Service-Southern Research Station to collect forest inventory and forest health monitoring data from a network of permanent sample plots. Funding for the program is provided through a 75% Federal grant and a 25% state match of the program budget. There are 3,491 total forest inventory plots located in South Carolina. Plots are sampled in 20% increments of the total, referred to as Panels. Plots are measured for growth projections, mortality and harvest assessments, and land-use classification. In addition, FIA provides information about South Carolina's forest resources including forest acreage, timber quality, timber volume, timber growth, forage, water, and recreation. The information provided by FIA allows the evaluation of both quantity and quality of these important resources. The US Forest Service furnishes data analysis and reporting for this program.

An additional subset of the FIA plots is selected to provide data on forest health. A total of 190 plots are located in South Carolina. Each year, during the summer, 20% of these plots, referred to as Panels, are measured to provide forest health data, such as, soil chemistry, tree health, tree carbon fixation, tree nutrient storage, and potential for tree survival and reproduction. Forest health data provides a quantitative assessment of current tree conditions and provides an integrated measure of site conditions, stand density and influence of external stresses. In addition, separate bioindicator plots are taken to detect the presence of ozone pollution. The Forestry Commission completed data collection on the forest health plots at the beginning of FY 2003-2004. This summer the US Forest Service collected all forest health plots and withheld grant funds to accomplish the data collection.

Currently, four full-time inventory crews are stationed throughout the state. The program coordinator is stationed in Columbia. All crewmembers are required to exceed a minimal accuracy average of 87% for all inventory plots. US Forest Service personnel conduct quality assurance and quality control checks to insure the accuracy of the data collected by Forestry Commission field crews. During FY 2003-2004, the average accuracy for all crews was 92.30%.

South Carolina is currently in the ninth remeasurement of the state. During FY 2003-2004, field crews completed one Panel of plots that began in FY 2002-2003, and began the next panel. For the year a total of 848 plots were completed with 633 plots collected by Forestry Commission crews and 215 plots collected by the US Forest Service. The US Forest Service provided additional field crews for three months to compensate for the understaffing of Forestry Commission field crews during FY 2002-2003. The Forestry Commission FIA program is currently on schedule to complete the entire ninth survey in five years.

### **BUSINESS DEVELOPMENT**

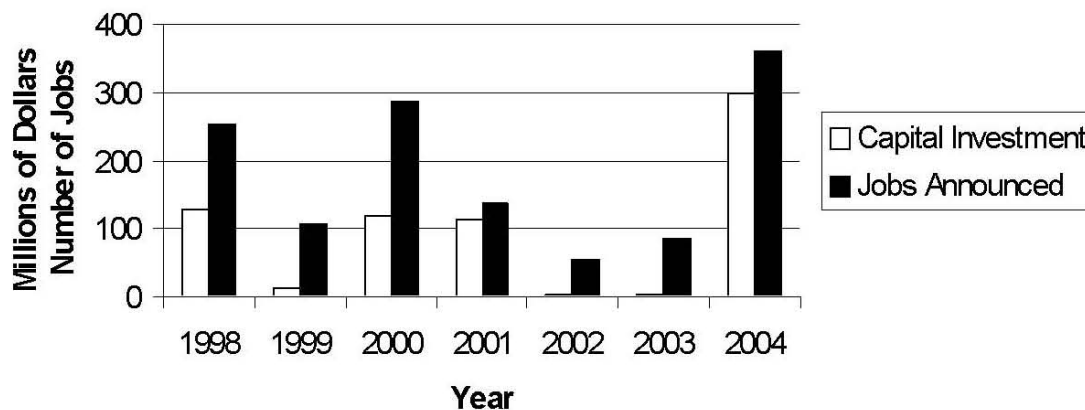
Forest industry development and investment increased significantly in spring 2004 with two major corporate announcements. Kimberly-Clark Corp. in Aiken County announced a \$200 million investment that will result in 200 new jobs over the next decade. Kimberly-Clark has made tissue and paper products in Aiken County for over 40 years. Kronotex USA Inc. began construction in April 2004 on a \$100 million melamine laminated flooring plant that will employ up to 160 individuals in the Barnwell area. Agency personnel worked on 12 additional projects during the fiscal year that may eventually lead to industry expansion or new development.

A major emphasis during this past fiscal year was the promotion of woody biomass as a renewable energy source in South Carolina. Two utilities have shown interest in utilizing biomass as a replacement energy source for coal. The Strom Thurmond Institute at Clemson University was funded to develop and publish a report on the "Potential for Biomass Energy Development in South Carolina." The report is due out fall 2004.

In addition to the Strom Thurmond Institute biomass project, the SCFC utilized USDA Forest Service grants to fund six university-based projects. Three of these projects were concluded during the fiscal year: (1) a wood residue inventory by USC, (2) a small diameter biomass analysis for the Edisto River Basin by USC, and (3) a statewide economic development report, developed by Clemson, that discusses the key factors used by forest products companies to locate new facilities.

During the 2004 fiscal year, the SCFC Resource Development Division represented the agency and forestry community through ten statewide and regional economic development organizations. New forest inventory data was drafted for "The State of South Carolina's Forests" report which is due out by fall 2004. A SC forest landowner survey was completed to identify landowner trends and the results were published in two professional journals. The SCFC has also taken a lead role in the SC Competitiveness Initiative representing the forestry clusters. Finally, 50 individual business assists were made to address single-issue requests.

**Figure 7.2.1**  
**Forest Based Economic Development Impact**

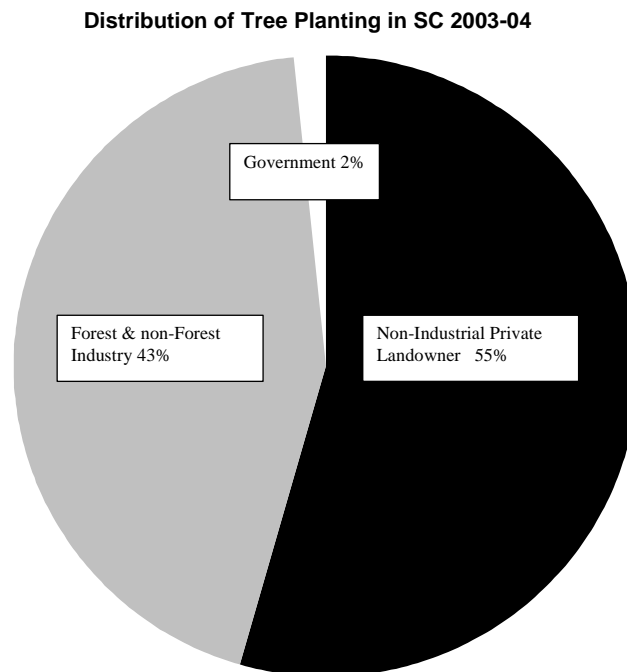


## NURSERIES AND TREE IMPROVEMENT

### NURSERIES

This year the SC Forestry Commission distributed a total of 7,202,000 seedlings to landowners in SC. A total of 51,823,000 seedlings were planted this year from all sources of which 88% were grown in the state. This is down from 69,989,000 seedlings planted last year. Tree planting has been dropping 10-27% a year since 1999-2000 with the largest drop this last year. This follows nearly a decade of large scale tree planting driven by CRP incentives. These trees are now providing ample pulpwood through thinning and timber and pulp prices are very low. A 10% drop next year would mean planting only 46 million trees statewide. Thus tree planting for the next two seasons (04-05 and 05-06) is likely to be between only 40 and 50 million seedlings.

The SCFC's goal is to provide quality seedlings to South Carolina landowners to support forest regeneration, promote efficient wood production and multiple use, promote restoration of longleaf pine ecosystems, and provide a wide variety of hardwoods and conifers not commonly available for wildlife, wetlands restoration, Christmas tree growers, and various cost-share programs. The SCFC is the primary provider of longleaf pine and hardwood seedlings in the state. Customer satisfaction surveys show a 96% satisfaction rate for products and services. We began shipping seedlings direct to customers by UPS both at Creech Greenhouse and Taylor Nursery. This was well received and 22% of orders were shipped this way.



Taylor Nursery has increased the number and type of hardwood seedlings and scaled back on loblolly and longleaf to adjust to changes in demand. Favorable weather conditions have resulted in a good crop and good field survival of seedlings. Taylor Nursery distributed seedlings to Walterboro, Spartanburg and Sumter coolers.

Creech Greenhouse in Wedgefield produces containerized seedlings and rooted cuttings. Demand for longleaf seedlings has leveled off but demand for containerized longleaf is still strong. Plans are being made to move the container production operation to Taylor Nursery in FY 04-05. The first crop of containerized seedlings grown at Taylor will be available for the 2005-06 planting season. This will allow more efficient production and consolidate resources and personnel.

### **Forest Tree Seed Collection Program**

Each year the South Carolina Forestry Commission collects or purchases pine cones and other forest tree seed for seedling production. During the past year, a variety of hardwood seed were purchased and collected to support our growing variety of hardwoods being produced. Considerable stocks of pine seed are available. Sales of surplus improved seed, especially the best families to industry have generated considerable revenue the last few years.

### **TREE IMPROVEMENT**

Niederhof Seed Orchard produced 516 bushels of second generation piedmont loblolly and 421 bushels of second-generation coastal loblolly pine cones. Only the best family seedlots are collected so that both a fast growth mix and rust resistant mix of loblolly pine can be grown at the nursery. We began grafting scion from families that have demonstrated superior traits for height and growth while exhibiting resistance to fusiform rust. These selections will be planted in our third cycle orchard at Niederhof. Based on reduced loblolly seedling production and the loss of state funds for tree improvement we have decided to end our participation in the NCSU Tree Improvement Coop. We have collected scion for the third generation orchard and clone banks this spring to capture our investment in the program. Production of top quality loblolly seed will still continue for several decades. NC Forest Service will manage the seed orchards at Piedmont Nursery (Piedmont Center) and provide us with 25% of the seed. NCFS has begun pruning the orchards and made excellent progress.

State Nurseries Seedling Production by Species, 2003-2004	
<b>Taylor Nursery Bareroot Seedlings</b>	
Baldcypress	32,000
Cedar, Eastern Red	20,000
Loblolly Pine, Coastal 2nd Generation	1,100,000
Loblolly Pine, Coastal 2nd Generation Rust Resistant	1,400,000
Loblolly Pine, Coastal 2nd Generation Fast Growth	1,500,000
Loblolly Pine, Piedmont 2nd Generation	1,366,000
Loblolly Pine, Pine 2nd Generation Rust Resistant	1,000,000
Loblolly Pine, Pine 2nd Generation Fast Growth	1,219,000
Loblolly Pine, Texas	50,000
Longleaf Pine	2,007,000
Virginia Pine	40,000
Virginia Pine, Christmas tree mix	29,000
White Pine (2 years old)	50,000
Slash Pine, Rust resistant	36,000
Ash, Green	17,000
Lespedeza, Attaway	1,200,000
Mulberry, Red	3,000
Oak, Cherrybark	9,000
Oak, Gobbler Sawtooth	11,000
Oak, Laurel	10,000
Oak, Sawtooth	37,000
Oak, Swamp Chestnut	20,000
Oak, Willow	10,000
Persimmon	6,000
Plum	3,000
Sweetgum	50,000
Sycamore	40,000
Walnut, Black	11,000
Washington Hawthorn	4,000
Yellow Poplar	12,000
<b>Total Bareroot</b>	<b>11,292,000</b>
<b>Creech Greenhouse Containerized Seedlings</b>	
Longleaf Pine	1,100,000
Atlantic White Cedar, cuttings	3,000
Carolina Sapphire	1,000
Clemson Greenspire	1,000
Texas loblolly	1,000
Virginia pine, Christmas tree mix	6,000
Leyland Cypress	17,000
<b>Total Containerized</b>	<b>1,129,000</b>
<b>Total Seedlings Produced by SCFC</b>	<b>12,421,000</b>
<b>Total Seedlings Distributed by SCFC</b>	<b>7,202,000</b>

## **ENVIRONMENTAL MANAGEMENT**

The Environmental Management Section is responsible for the development and implementation of South Carolina Forestry Commission programs that are related to the environmental protection of forest and associated natural resources. Issues that are addressed include the protection of water quality, site productivity, endangered species, and unique ecosystems.

### **BMP Implementation Monitoring**

Compliance with harvesting BMPs has been documented in three previous surveys. Compliance for harvesting BMPs was 84.5% in 1990, 84.7% in 1991, and 89.5% in 1994, 91.5% in 1999, and 94% in 2001. A new survey was initiated in the fall of 2004 to update BMP compliance. Two hundred sites were located and inspected for compliance with BMPs relating to timber harvesting throughout the state. Site preparation compliance has been measured three times. Compliance with BMPs related to site preparation was 86.4% in 1996, 98% in 1999, and 96% in 2003. An additional round of monitoring to measure compliance with BMPs related to timber harvesting will be conducted in the fall of 2004.

### **BMP Education/Training Program**

BMP training and education are essential to the success of the Forestry Commission's non-regulatory BMP program. During this fiscal year, 67 BMP meetings were held across the state for forest landowner groups, government agencies, and professional organizations. A total of 2,806 people attended these meetings. Included in these meetings were five Timber Operations Professional (TOP) workshops, six TOP Refresher workshops, and six TOP SMZ workshops, which reached 418 loggers, landowners, foresters, and road construction contractors.

### **Courtesy Exam Program**

The S.C. Forestry Commission's BMP Foresters, located in each of the three operating regions of South Carolina, offer courtesy BMP exams to landowners, foresters, and timber buyers. The BMP Forester makes site-specific BMP recommendations to follow while conducting forestry activities. During the 2002-2003 fiscal year, the BMP Foresters completed 425 courtesy exams. Of the 425 sites, 420 (98.8%) were completed in compliance with our recommended guidelines.

### **Endangered Species**

This year, the Environmental Management Section continued training on endangered species biology and management, with an emphasis on those species that may impact forestry operations. The BMP Foresters are available to provide information and assistance to SCFC personnel, foresters, and private landowners. This assistance may include site visits, cooperating on the Safe Harbor program administered by the S.C. Department of Natural Resources, and assisting State Forests and other state-owned properties upon request. This year, the BMP foresters made 23 site visits to assist landowners and foresters with endangered species identification and information and presented information regarding endangered species to 8 groups, reaching 117 college students, forest landowners, foresters, loggers, and the public.



## **EDUCATION AND INFORMATION TECHNOLOGY**

The State Forester's reorganization that went into effect on July 1, 2003 created a new Division of Education and Information Technology to include all Forestry Commission computer and communication functions and consolidate statewide fire dispatch operations.

### **INFORMATION TECHNOLOGY/COMMUNICATIONS/AND DISPATCH**

#### **INFORMATION TECHNOLOGY**

The Information Technology group is responsible for the maintenance and support of the agency's wide area network, 10 Windows NT Servers, over 150 computer users, software applications and implementation of various initiatives to support agency operations and programs. Initiatives implemented in FY 2004 were the migration from Windows NT 4.0 operating systems and upgrading to Microsoft Office 2003. As new hardware is purchased, emphasis will be placed on replacing or upgrading computers connected to the agency's network running this unsupported operating system.

In support of a new computer aided dispatch system, the agency's wide area network to the regional dispatch centers and administrative offices is being upgraded. This upgrade will replace equipment and data circuits installed in 1996. Servers and computers supporting this mission critical operation will also be replaced and upgrade to Windows XP or Server 2003 operating systems. These upgrades will serve as the backbone for the agency's migration away from Windows NT.

#### **GIS**

A GIS analyst was hired to implement projects to support National Fire Plan grant activities related to wildfire risk assessment, planning, response, and hazard fuels treatment. He will also concentrate on efforts to implement and collect data to improve the predictive capability of a smoke model developed by Dr. Gary Achtemeier of the University of Georgia for residual smoke impact on wildland-urban interface areas in South Carolina.

In conjunction with a new computer aided dispatch systems being installed by the agency, the GIS analyst will be assisting in obtaining or developing map layers to be utilized by that system. Of major emphasis will be the evaluation of the usefulness of a 911 street addressing layer available from the State Budget and Control Board's Office of Research and Statistics. This data is a compilation of county level 911 address and street centerline data sets.

The implementation of new mapping technology, design of user applications for geographic information systems, training and advising agency personnel on all aspects of GIS implementation will also be major functions of this individual.

#### **COMMUNICATION TECHNOLOGY**

Radio and telecommunications operations were centralized to provide statewide support with a reduced support staff due to retirements and unfilled vacancies as a result of budget cuts. This reorganization would also be beneficial to the development of a cohesive long range plan as the agency begins to update its two-way radio system to narrowband technology and considers the replacement of 10+ year old telecommunication equipment at the regional dispatch centers and administrative offices.

In an effort to make the agency's VHF radio communications system more reliable during severe weather events that can cause prolonged power outages, standby electric generators were purchased for thirteen, critical, remote communications and radio repeater sites. Installation is schedule for the coming fiscal year as security, electrical and utility services are arranged at each site.



To better support the agency's computers and related systems, the communications support staff received two weeks of training on supporting and troubleshooting computer hardware and operating systems. This training prepared these individuals for Computer Technology Industry Association (CompTIA) certification and gave them the skills and knowledge to diagnosis computer problems and perform preventative maintenance.

## **DISPATCH**

A Request for Proposals (RFP) for a new and enhanced computer-aided dispatch system was released in FY 2003. A vendor was selected and a contract awarded to a company that specializes in 9-1-1 dispatching systems in November, 2003. Work began on the system upgrade in January, 2004. Installation and training is scheduled for 2005. Federal funds from the National Fire Plan and other grants will be used to fund this new system.

A major goal in centralizing dispatch operations is to standardize operations of three dispatch centers. That effort began in earnest this year. A Dispatch Coordinator oversees all dispatch operations. A Dispatch Manager position was created to handle scheduling and daily operations for each center. These positions were filled from within the agency and managers began working with the Coordinator to make statewide procedures more consistent.

## **CREATIVE SERVICES**

The Creative Services Department provides audio-visual and print material for use by schools, Forestry Commission personnel and the public for both educational and training purposes. The department oversees compliance with Title VI and is the agency's contact for forestry outreach. Creative Services is responsible for keeping lines of communications open with Forestry Commission external and internal audiences. Currently the department accomplishes this using a weekly electronic news bulletin and a frequently updated website.

### **The National Fire Plan**

A major effort of the Creative Services Department this year was to produce public information and education to support the Forestry Commission's grant projects under the National Fire Plan (NFP).

Firewise Workshops were planned and conducted for homeowners and community leaders at Table Rock State Park, Hampton County, Horry County and Mt. Pleasant, South Carolina. All locations were chosen because recent wildfires had threatened homes and communities nearby. Workshops were based on the NFPA Firewise interactive CD designed for small group participation. Although this presentation has been very successful, the SCFC WUI Steering Committee decided to contract with Interactive Training Media (ITM) to adapt the program it had designed for the state of Florida. The Creative Services Department began gathering extensive video footage, information and photos for ITM to use in their interactive programs, *Living on the Edge* and *How to Have a Firewise Home*.

Four radio spots were produced and two-week campaigns were scheduled in NFP grant targeted project areas in the spring and again in the fall. Direct mail Firewise postcards were sent to every home and business in zip code areas surrounding two recent interface wildfires. A third card was sent to businesses and residents in an ice storm-impacted area warning them of fire danger due to accumulation of down debris. A Powerpoint presentation, *Living with Fire in South Carolina*, was created for use by the WUI Coordinator and added, with narration, to a DVD including the Forestry Commission-produced movies *Your Home in the Line of Fire* and *It Could Happen to You*. It also includes a slideshow of WUI photographs.

In February, Forestry Commission personnel assisted the state of North Carolina with its Firewise kickoff workshop for some 200 community leaders.

### **Web**

There were 673,200 total web hits in fiscal 2003-04 including the biggest one month total so far in March, 72,979 hits. New sections were added on GIS and the newly acquired Wee Tee State Forest. All SCFC policies and procedures were put online for SCFC employees. Both manuals were reformatted as pdf's to be updated online as changes are made.

## **Publications**

A card was produced to summarize the major findings of the 2003 Forest Inventory and Analysis.

## **DVD's/Videos**

A slide program called The Williams Hills Fire, describing a South Carolina fire fatality, was transferred to video and is now available on DVD and video with new narration.

## **ENVIRONMENTAL EDUCATION**

It is the responsibility of the Environmental Education Coordinator to plan, develop, support, and coordinate the Forestry Commission's environmental education effort. The Coordinator oversees the development of Harbison State Forest's Environmental Education Center and serves as State Coordinator of Project Learning Tree (PLT) which is an international environmental education program designed for students in pre-kindergarten through high school. The S.C. PLT Coordinator is also the elected coordinator representative on the National PLT Education Operation Committee, serving to represent all the PLT Coordinators throughout the world. This position is a 4-year elected term. The Coordinator also represents the Commission on the Coalition for Natural Resource Education, the Environmental Education Committee of the Governors' Interagency Council on Natural Resources, and various other committees involved with environmental education throughout the state.

Last fiscal year (July '03 to June '04) SC PLT conducted 16 workshops throughout the state to train 446 teachers. One of these workshops was a facilitator workshop in which 28 teachers, foresters, and resource professionals were trained or retrained to conduct PLT workshops throughout the state. In addition, PLT participated in 4 exhibits and/or presentations at various functions across the state to reach approximately 1266 participants. Of particular interest are two new initiatives that SC PLT began through grants with the national PLT office. "Energy & Society" is a new PLT curriculum that teaches the basics of energy, energy conservation, and renewable vs. non-renewable energy alternatives (including biomass). The second initiative is the "Burning Issues" interactive CD curriculum. This program was sponsored by BLM and uses technology for students to learn ecological principals related to fire ecology, the importance of prescribed fire, and how to maintain a fire safe home in the wildland/urban interface.

The Forestry Commission was instrumental in assisting the training and conducting of this year's Envirothon competition. The Envirothon is a program for high school students to learn more about our natural environment. The Envirothon tests the student's knowledge on topics such as soils, water resources, forestry, wildlife, and current environmental issues. Russell Hubright, Forest Director for Harbison State Forest served on the steering committee, establishing contacts and training throughout the state, teaming our Commission employees and high school teams in their areas, along with conducting a training session for the teachers and coordinating the forestry part of the competition and test.

The Wood Magic Forest Fair was again successful this year. This event was held at Harbison State Forest in Columbia and Sewee Visitor's Center in Charleston County. An in-school program was held in the Upstate for those schools that would normally have been accepted into the WMFF program at Clemson, which was canceled this year. The program involved approximately 2277 students and 338 teachers and adult chaperones. Four hundred thirty-seven applications were received to attend the Wood Magic Forest Fair program this year. However, the program could only accommodate 108 classes at the three sites. Demand continues to exceed the capacity of this popular education program. Clemson University, South Carolina Forestry Commission, S. C. Forestry Association and the USDA Forest Service jointly sponsor SC's Wood Magic Forest Fair program, with the Forestry Commission serving as the key partner for logistics and recruitment. Over 43 other organizations also contributed to the success of this award -winning program.

The Forestry Commission was a key partner in the SC Teachers' Tour Coalition, an association of forest industry representatives, state and federal agencies. This coalition conducted the SC Teachers' Tour in the Pee Dee area in June of this year. This successful tour provided 25 teachers with a first-hand experience of the forest industry and forest management. These educators received training, resources and information to conduct lessons in sustainable forestry for their students. The participants received 3-hours of non-degree graduate credit for their efforts. The

Environmental Education Coordinator serves as an adjunct professor for the University of Charleston in order to obtain this credit for the educators.

Using the Title III Proposal under the Rural Schools and Community Self-Determination Act of 2000, a partnership has been developed between the Education & Information Technology Division of the Commission and the Clemson Cooperative Extension Service to use the Piedmont Forestry Center in Oconee County to conduct natural resource based environmental education classes for schools in the Oconee County area. Last year 14 programs were conducted for 582 students and 70 teachers and adults from Oconee County schools at the Piedmont Forestry Center. This was the second year for this program and its attendance increased five-fold from the previous year. With the completed development of the Piedmont Forestry Center in the fall of '04, use of this Center should show dramatic increase over the next few years.

The Forestry Commission continues to be a strong supporter of the Coalition for Natural Resources' environmental education efforts throughout the state. Foresters are trained to help conduct Teaching KATE (Kids About The Environment) environmental education lessons in forestry at Camp Long in Aiken County and at Camp Cooper in Clarendon County.

### **Environmental Education at Harbison State Forest**

Harbison Environmental Forest, located within the city limits of Columbia, contains 2,176 acres. This tract is being managed as a public greenspace to emphasize environmental and forestry education, demonstrate forest management practices, and serve as a forest recreational area. The forest is open seven days a week, with estimated annual attendance of 75,000 – 90,000.

Harbison's staff and other SCFC employees associated with Harbison conducted 37 programs this past year, serving approximately 2,746 participants. Twenty-five programs were conducted at Harbison, with 1,147 participants and 12 programs were conducted outside of Harbison by the staff, serving approximately 1599 participants.

Harbison continues to offer support to the Scouting community. Nine scouting programs were held for Scouts last year. Approximately 87 scouts and 35 leaders participated in these programs. Scouts and other organized groups continue to use the four primitive camping facilities at Harbison. Sixty-seven groups used the camping facilities with a total of 1,420 campers.

The Harbison Environmental Education Center is a 5,000 square foot log building containing three offices, a small conference room, a screened porch, a large deck and a 100-seat conference room. The conference rooms at the Center are offered free to groups or agencies conducting environmental education workshops or classes. The Center was used 39 days in the last fiscal year to conduct environmental education events, with approximately 2505 people attending these events. These include programs directly or jointly sponsored by the SCFC such as the Wood Magic Forest Fair, Project Learning Tree educator and facilitator workshops, the S.C. Teacher's Tour, school groups, and a creating wetlands vernal pond workshop. Other environmental education events were also held at the center free of charge in which SCFC participated but did not sponsor, such as the State Department of Education's SC MAPS program for teachers, the Coalition for Natural Resource Education meetings, Environmental Education Association of South Carolina annual cooperators meeting, and the Soil and Water Conservation Districts training. Harbison Environmental Education Center remains an important hub for the Forestry Commission's education mission as well as other cooperative environmental educational entities.

### **Piedmont Forestry Center**

An 800-acre former forest tree nursery near Salem, SC is being converted into a training and conference center for use by the Forestry Commission and the Highway 11 corridor and upstate area. The former packing shed is currently being restored and redesigned to provide a large conference room, two breakout rooms, a kitchen, lobby and office area. Most of the construction work is being done by Forestry Commission employees. The facility should be completed by September 2004 in time to accommodate a Wood Magic Forest Fair.

## ADMINISTRATION

### South Carolina Forestry Commission Financial Statement FISCAL YEAR 2003 - 2004

#### REVENUES

State Appropriations 14,660,108

Federal Grants 4,565,713

#### **Earmarked Funds**

1706Hunting & Fishing License	126,877
3801Refund of Prior Year Expenditure	8,227
4819Burning Assistance Fee	66,421
4820Fire Lane Fee	97,155
4821Timber Marking Fee	5,584
4829Training Conf - Registr Fee	3,248
4848User Fee - State Park & Forest	90,839
4850Miscellaneous Fee - Field Trial	3,095
4871Construction of Water Bar	925
4872Stand By for Prescribed Burning	3,250
4901Sale of Seedlings	551,540
4902Sale of Timber	1,438,076
5750Conviction Surcharge	14,042
7401Rent - Residence	41,768
7402Rent - Farm Land	49,374
7403Rent - State Owned Property	61,775
7407Rent - Equipment	2,240
7605Contributions & Donations	1,454
7702Insurance Claims	21,890
7803Sale of Services	7,350
7810Sale of Publications	30
7820Sale of Materials & Supplies	1,853
7823Sale of Recycling Material	541
7825Commission-Vending Machines	159
4853Forest Product Assessment	364,000
Sale of Assets	185,672

**Total Earmarked** \$3,147,385

**Total Revenue** \$22,373,207

#### EXPENDITURES

State 14,657,753	
Federal	4,155,207
Earmarked	2,384,905
Permanent Improvements	617,250

**Total Expenditures** \$21,815,115

**EXCESS OF REVENUE O/(U) EXPENDITURES** \$558,092

## HUMAN RESOURCES MANAGEMENT

The Human Resources Management Section administers the following programs for the SCFC:

- Employee Relations, to include Progressive Discipline, EPMS, and Grievances and Appeals
- Classification and Compensation, to include performance increases and bonuses
- Job Announcement Postings
- Recruitment
- Employee Benefits, to include Health, Dental, Life, and Long Term Disability Insurance, Employee Wellness, Employee Innovation System and Tuition Assistance
- Leave, to include Annual, Sick, Leave Without Pay, Family Medical Leave Act, Leave Transfer Program
- Affirmative Action
- Service Awards
- Retirement, to include counseling and assistance with the process for both service and disability applications
- Personnel Records and Files Maintenance
- Commercial Drivers' License Drug and Alcohol Testing
- Overtime and Fair Labor Standards Act
- Reduction in Force
- Americans with Disabilities Act

## TRAINING AND SAFETY

During fiscal year 2003-2004, the Training and Safety section continued to work to provide a well-trained and safe workforce. The Training portion of this section is charged with providing the training needed by SCFC employees to carry out their duties in a safe, efficient, and effective manner. There were 158 training sessions with 1324 employees attending during fiscal year 2003-2004 (some employees attended multiple sessions). These sessions are listed by major subject area below.

Category	Number of Sessions	Number of Employees Attending
Fire Management	26	307
Forest Management	24	145
Equipment Maintenance	6	20
Safety	53	584
Law Enforcement	22	206
Personnel Management	4	11
Administration	23	51
<b>Total</b>	<b>158</b>	<b>1324</b>

The Training section is also responsible for coordinating the agency's fire management and Certified Prescribed Fire Manager training for non SCFC personnel. During the fiscal year 03-04, 25 fire management training sessions with 541 people attending and 3 Certified Prescribed Fire Manager training sessions with 76 people attending were held.

Other major accomplishments include developing and implementing a chainsaw safety and operation training program

The Safety portion of the section is responsible for insuring that all SCFC employees work in a safe environment, in a safe manner, and comply with safety regulations. During fiscal year 2003-2004, 10 safety inspections were made at SCFC facilities by the SCFC Safety Coordinator. Safety violations were noted and corrected.

During fiscal year 2003-2004, there were 31 personal injuries (many minor in nature) to SCFC personnel while on duty.

The SCFC Physical Fitness Program was implemented in September 2001. The Training and Safety section is charged with administering the program. Participation in the program is required for all fireline employees and for those that volunteer to assist with fireline duties. During the fiscal year, 270 employees participated in the program. The program was in its third year where the goal was to walk 1 mile in 15 minutes while carrying a 25 pound pack.

## **OFFICE OF THE STATE FORESTER**

### **INFORMATION OFFICER**

The Information Officer is charged with generating news media coverage of SCFC activities and responding to inquiries from the news media. During FY 04, the Information Officer assumed additional duties associated with the law enforcement program.

During the year, the Information Officer wrote and distributed 53 press releases. Some releases were for statewide distribution; others covered specific local events and were released only to the appropriate local media. In addition, two special interest pieces were written and released through a forestry trade publication.

A breakdown of press releases by subject area is as follows:

Fire	18
Law Enforcement	14
Environmental Forestry	5
Community Forestry	6
State Forests	3
Ice Storm Damage	3
Administrative	2
Insects/Disease	1
Nurseries	1

The Information Officer provided approximately 190 interviews to reporters statewide. About 40% of the interviews were with television stations, 55% were with newspaper reporters, and 5% were for radio.

### **INTERNAL AUDIT**

The Internal Audit Department is an independent appraisal function that examines and evaluates the adequacy and effectiveness of Commission activities as a service to all levels of Management and the Commissioners. Emphasis is on auditing the agency's activities, processes, systems, and operations to ascertain efficiency in quality services.

During this fiscal year an audit was performed of Human Resources – Contracts (Memorandums of Understanding) with Temporary Employees. The following audits were followed up on in this fiscal year: Audit Report 2003-02 Audit of Shop Operations and Audit Report 2004-01 Audit of Human Resources – Contracts (Memorandums of Understanding) with Temporary Employees. Equipment custodians were responsible for verifying their own fixed

assets this fiscal year with the knowledge that spot checks would be performed by Internal Audit. Internal Audit verified 10% of the agency's custodians' inventories.

Other activities include: periodic inventories of shop supplies at regional shop locations, fiscal year-end inventories of shop supplies in all relevant locations, assistance with Wood Magic at Harbison State Forest and Career Day at a local school.

The Internal Audit Department was also aware and involved, where applicable, in reviews performed by external sources including the USDA Forest Service, the State Auditor's Office, and State Fleet Management. In addition, memorandums were prepared and submitted to Management noting various issues that warranted attention.

The Internal Auditor has obtained adequate training to maintain compliance with the continuing education requirements of the Government Auditing Standards.

During Fiscal Year 2003-2004, the Internal Auditor was elected to the Board of Directors for the South Carolina State Internal Auditors Association where she serves as President.

### **Records Management**

The Internal Audit Department oversees the Records Management System for the Commission. The Internal Auditor serves as Records Officer. We have Record Liaison Officers selected based on the organizational structure of the Commission. The Records Officer is responsible for training the Record Liaison Officers. Such training is performed periodically to ensure consistency and continuity. In addition, the Record Liaison Officers are kept abreast of other training opportunities available.

During Fiscal Year 2003-2004, a total of 46 cubic feet of official records were destroyed in accordance with the retention schedules approved by the South Carolina Department of Archives and History. This total does not include the destruction of copies. In addition, a minimal amount of records were transferred to the South Carolina Department of Archives and History for possible retention.

During Fiscal Year 2003-2004, the Records Officer was selected to serve on the Awards Committee for the South Carolina Public Records Association.

# South Carolina Forestry Commission

## Organizational Chart

